GAZETTEER OF INDIA

WEST BENGAL

HOWRĀH

WEST BENGAL DISTRICT GAZETTEERS

HOWRĀH

By

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PREFACE

The present volume of the District Gazetteer for the district of Howrah is the fifth in the series of West Bengal District Gazetteers now being written under a scheme jointly sponsored by the Government of India and the State Government. The previous District Gazetteer for this district was written by L. S. S. O'Malley and M. Chakravarti and published in 1909. The present volume, however, is not just a revision of the previous District Gazetteer by L. S. S. O'Malley and M. Chakravarti, though much of the older material has been taken from the latter book. The scheme followed in this volume was decided by the Government of India keeping in view the achievements of the Government and the progress made by the people since Independence.

Sri Amiya Kumar Banerji, I.A.S. the then State Editor, prepared and submitted the draft of this volume to the Central Gazetteers Unit. In accordance with the suggestions made by the Central Gazetteers Unit and the State Advisory Committee the draft has been revised and some portions have also been rewritten by me.

I take this opportunity of expressing my deep gratitude to Dr. P. N. Chopra, M.A., Ph.D., Editor (Gazetteers), Department of Culture, Government of India, and to members of his staff for the very painstaking scrutiny of the draft and for useful suggestions for the overall improvement of the quality of this volume.

I express my indebtedness to Shri B. Sarkar, I.C.S. (Retired), Chairman of the State Advisory Committee and to the late and lamented Professor Nirmal Kumar Bose, F.N.I.; Dr. Sashi Bhusan Chaudhuri, M.A., Ph.D. and Dr. Pratul Chandra Gupta, M.A., Ph.D., members of the Advisory Committee, for the keen interest taken in the work and for making valuable suggestions for the improvement of the volume.

I also thank the entire team of officers and staff of this office, each one of whom contributed his mite towards the preparation of this volume and its printing.

Numerous departments of the State and Central Governments and various branches of the district administration rendered valuable assistance by supplying information and data incorporated in this volume. I express my sincerest thanks to each of them and to Sri Amiya Bhusan Chatterjee for his contribution appearing in an Appendix. The maps incorporated in this volume have been prepared by Shri Dilip Kumar Khan, M.A.

The copy-right photographs printed in this volume have been supplied by Shri Amiya Kumar Banerji, I.A.S., Joint Secretary, Department of Information and Public Relations, Government of West Bengal, who has placed me under an obligation by giving permission to print them in this volume.

I also thank the management of Sree Saraswaty Press Ltd. for their efficient printing, block-making and binding of the present volume.

DURGADAS MAJUMDAR

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CHAPTER I

GENERAL

INTRODUCTORY

Origin of the name of the district

The name of the Howrah district as also of its headquarters town (sometimes spelt as 'Haurah'[1] and also pronounced as 'Hābrā') seems to have gained currency with the opening of railways from Howrah in 1854. Prior to that, a village named Harirah—most possibly the source of the present name of the district—appears to have been located in or about the site now occupied by Howrah town. The Bengal Council of East India Company, on the accession of the Emperor Farrukshiyar to the throne of Delhi in A.D. 1713, sent a deputation to him with a petition praying, *inter alia*, for the settlement of the villages 'Salica' (Salkia), 'Harirah' (Howrah), 'Cassundeah' (Kasundia), 'Ramkrishnopoor' (Ramkrishnapur) and 'Batter' (Betor) to the west of the Bhagirathi facing Calcutta.

Philologically, the derivation of the name 'Howrah' from 'Harirah' is not at all improbable through the process of epenthesis and vocalic harmony, for example, Harirah > Hairiah > Hairrya > Howrah. Such gradual transformation of spoken words is common in Bengali modes of speech.[2]

O'Malley and Chakravarti have said:[3] "The derivation of the name Howrah is uncertain. According to one account, it is derived from the Bengali word *hābar*, meaning stumbling, with reference to the numerous ruts in the streets of Howrah city, which formerly caused the unwary pedestrian to stumble. This seems a far-fetched explanation. There is a word *hāor* used in Eastern Bengal for a marsh or a swampy depression filled with water in the rains, and this would *a priori* seem a plausible derivation; but the word does not appear to be known in Western Bengal."

Another researcher has supposed that "the name Howrah must

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[1] C. R. Wilson—The Early Annals of the English in Bengal, Being the Bengal Public Consultations for The First Half of the Eighteenth Century, Summarised, Extracted and Edited, with Intro. and Illustrative Addenda, Vol. II, Part I. Lond., 1900. p. 172.

[2] Dr. Suniti Kumar Chatterji has made a detailed reference to the Bengali suffix 'ড়া' (ṛā) occurring at the end of place-names and has traced its origin from the Austric word 'orak' meaning 'a house' and has also suggested that the Sanskrit word 'vata' meaning 'to cover' or 'to enclose' to be the source of the said affix. (*Vide*, The Origin and Development of the Bengali Language. Vol. I., p. 66 & Vol. II., p. 668).

[3] L.S.S. O'Malley and M. Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. pp. 168-9.

have come from Harirah which again might have come from Haroah or Howar or Haorh or Hayar or Sayar, that is sea, which extended up to this place at one time or from Haborh, which according to the Uriya language, is a land full of pits, ditches and drainage canals. ...Howrah at one time formed part of Orissa and was ruled by a Uriya king."[1]

On an examination of the preceding theories, it appears most likely that the name of the district as also of its headquarters town originated, by the process of epenthesis and vocalic harmony, from Harirah, the early 18th century village, which was situated in or around the present city of Howrah.

Location, general boundaries, total area and population

This smallest district in West Bengal is situated between 22°12′ 30″ and 22°46′55″ north latitude and 88°22′10″ and 87°50′45″ east longitude.[2] It was recently transferred from the Burdwan Division to the Presidency Division under Government of West Bengal Notification No. 999-G.A. dated March 4, 1963.

It is bounded on the north by the Arambagh and Serampore subdivisions of the Hooghly district; on the east by Calcutta and the Barrackpur, Alipur and Diamond Harbour subdivisions of the 24-Parganas district; on the south by the Tamluk subdivision of the Midnapur district; and on the west partly by the Tamluk and Ghatal subdivisions of the latter district and partly by the Arambagh subdivision of the Hooghly district. The boundaries are partly natural and partly artificial. On the west and south-west the Rupnarayan, and on the east and south-east the Bhagirathi constitute natural boundaries, while on the north, except for small stretches to the north-east and north-west bounded by the Baly Khal and the Damodar respectively, the boundary is formed by an artificial line marking the southern limits of the Hooghly district.

The area of the district was 575 sq. miles according to the Survey of India and 560.1 sq. miles according to the Census of 1961.[3] The difference is presumably due to the different modes of computation. According to the 1961 Census, the rural and urban areas of the district comprised 515.7 and 44.4 sq. miles respectively while the total population of the district was 20,38,477, of which 11,27,392 were males and 9,11,085 females. The total population included 1,59,142 scheduled castes males, 1,40,649 scheduled castes females, 3,657 scheduled tribes males and 2,454 scheduled tribes females. The rural and urban populations were 12,13,385 and 8,25,092 respectively giving a ratio of 59.52 : 40.48 between the two. The overall population density was 3,639 per sq. mile; the rural and urban density figures being 2,353 and 18,554 per sq. mile respectively.

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[1] J. Bonnerjee—Howrah Civic Companion, Vol. I. Howrah, 1955. p. 3.

[2] Source: Director, Map Publication, Dehra Dun.

[3] Census of India, 1961, Vol. XVI, West Bengal and Sikkim, Pt. II-A, General Population Tables. p. 70.

Subdivisions, Thanas, C.D. Blocks, Anchal Panchayats & Gram Panchayats

The district has two subdivisions, namely Howrah (Sadar) and Uluberia. The headquarters of the district as also of the Sadar subdivision is Howrah while Uluberia is the headquarters of the subdivision of that name.

The district comprises 17 police stations and 1 investigation centre. The Sadar subdivision consists of 11 police stations, namely Baly, Bantra, Domjur, Golabari, Howrah, Jagachha, Jagatballavpur, Malipanchghara, Panchla, Sankrail and Sibpur and an investigation centre, Lilua. The Uluberia subdivision consists of the 6 police stations of Amta, Bagnan, Bauria, Syampur, Uday Narayanpur[1] and Uluberia.

There are 14 community development blocks in the district, namely Amta I, Amta II, Bagnan I, Bagnan II, Baly-Jagachha, Domjur, Jagatballavpur, Panchla, Sankrail, Syampur I, Syampur II, Uday Narayanpur, Uluberia I and Uluberia II.

There are 153 Anchal Panchayats and 1,053 Gram Panchayats in the district.

The two municipal towns in the district are Howrah (population 5,12,598) and Baly (population 1,01,159). According to the Census of 1961, there are 21 non-municipal towns in the district the names and respective populations of which are as follows: Amta (8,086), Andul (4,690), Banitabala (4,979), Banupur (5,654), Bauria (8,492), Burikhali (5,703), Chengail (14,831), Domjur (8,670), Fort Gloster (13,785), Jagachha (4,758), Jhorhat (6,438), Kolara (8,495), Mahiari (7,079), Manikpur (7,844), Nibra (6,599), Panchla (9,102), Sankrail (11,844), Santragachhi (8,701), Sarenga (10,704), Unsani (6,635) and Uluberia (18,509).

On account of varying Census definitions, the number of towns in the district has increased from 2 in 1941 to 4 in 1951 and to 23 in 1961. "In 1951, all municipal towns and areas administered by

[1] Under Notification No. 2702 Pl. dated June 17, 1959 of the Home (Police) Department, Government of West Bengal, Uday Narayanpur was constituted a separate police station with the following *mauzās* (the corresponding Jurisdiction List numbers are shown within brackets) previously falling within the Amta thana: Dihi Bhursut (1), Assanda (2), Rampur (3), Dakshin Rampur (4), Harali (5), Pinrapur (6), Goja (7), Sultanpur (8), Sitapur (9), Khempur (10), Bairakurchi (11), Khalatpur (12), Ghola (13), Hariharpur Dwitiya (14), Kurchi Binodbati (15), Pratap Chak (16), Uday Narayanpur (17), Sibpur (18), Etarai (19), Khorda Etarai (20), Pancharul (21), Uttar Harispur (22), Kakraipota (23), Subal Chak (24), Uttar Manasri (25), Abhirampur (26), Ray Chak (27), Dakshin Singti (28), Kalikapur (29), Chak Baharampur (30), Purpat (31), Kumirmora (32), Sinti (33), Rajapur (34), Sibanipur (35), Jangalpara Belgram (36), Senpur Dwitiya (37), Akna Dwitiya (38), Chak Thakurani (39), Sonagachi (40), Joka (41), Jagalda (42), Jaynagar (43), Nara Narayan Chak (44), Mansuka (45), Kumar Chak (46), Kismat Kanupat (47), Kanupat (48), Debipur (49), Dakshin Manasri (50), Chand Chak (51), Sonatala (52), Gar Bhabanipur (53), Bhabanipur (54), Chitrasenpur (55), Kansona (56), Baje Protap (57), Pratap Narayanpur (58), Kultikari (59), Raghunathpur (60), Bidhi Chandrapur (61), Gumgar (62), Peru Harispur (166), Krishna Chak (167), Thakurani Chak (168), Mallik Chak (169), Narikelberia (170), Khila (171), Gauranga Chak (172), Pahara (173), Sib Narayan Chak (174), Nazarkhan (175), Par Radhanagar (176), Kamal Chak (178) and Nimdangi (179).

Town Committees, Union Committees, Station Committees and Cantonment Boards were treated as urban. Other areas were also classified as urban if such an area (*a*) contained a population of not less than 5,000, (*b*) had a density of population of not less than 1,000 inhabitants per sq. mile, (*c*) had some importance as a centre of trade or distribution or administration and (*d*) had three quarters of its adult male population chiefly employed in pursuits other than agriculture. In 1961, the same criteria about urban classification were communicated to the District Magistrates while requesting them to suggest the names of places to be treated as towns in their districts for the purpose of the Census. But subsequently, the criterion (*c*) was not insisted upon specially but it is assumed that it has been automatically fulfilled in respect of all places declared as towns in 1961."[1]

According to the Census of 1961, the total number of *mauzās* borne on the Jurisdiction Lists of the district was 831 of which 787 were inhabited villages, 11 uninhabited and 33 fully included in the urban areas of the district.

Formation of the district as an administrative unit

The formation of the district as an administrative unit in the modern sense has been a phased process over a long period linked with the administrative set-up of a number of neighbouring districts like Hooghly, Burdwan, 24-Parganas and Calcutta. Howrah, along with Burdwan, was ceded to the East India Company by Mir Kasim in A.D. 1760 and came to be managed by the covenanted servants of the Company which had, according to the terms of the cession, obtained the right of a free and perpetual tenure. The ceded lands were leased out to temporary revenue-farmers for three years during which period they were not directly responsible to the Company for their management. Since lands within the Howrah district were leased out at proportionately higher rates than those obtaining in other ceded tracts, the result was that the revenue-farmers of the district failed to pay stipulated *Mālguzāri*.[2] In 1765, at the end of the 3-year contract with revenue-farmers in the ceded districts, the Company acquired the *Diwāni* for the whole of Bengal. Under the administrative system introduced in 1769, Verelst became the first Supravisor of Burdwan, and consequently of Howrah as well. The arrangement, however, had its defects. "The internal Government of the country was in disorder, and the people consequently suffered. Injustice and extortion on the part of the public officers were rampant, the Court of Directors therefore resolved to introduce reform."[3]

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[1] Census of India. 1961, Vol. XVI, West Bengal and Sikkim, Pt. II-A, General Population Tables. pp. 77-8.

[2] C. N. Banerjei—An Account of Howrah, Past and Present. Calcutta, 1872. p. 25. The *Mālguzāri* signified: (*a*) the revenue assessment, or (*b*) the payment of land-revenue, or (*c*) the person or land subject to such payment [Ganguli & Basu (Ed.)—Wilson's Glossary of Judicial and Revenue Terms of British India. Calcutta, 1940. p. 507].

[3] C. N. Banerjei—op. cit. p. 26.

In 1772, they decided to 'stand forth' as the Dewan and this brought in its train a number of administrative changes. Mr. S. Davis became the first District Officer of Burdwan whose jurisdiction extended over Howrah also. But for the administration of criminal justice Howrah was placed under Calcutta.[1] During the subsequent administrative changes that took place in 1774, 1781 and 1790 the district continued to figure under the general jurisdiction of Burdwan. In 1793, the Collectors were divested of all judicial and magisterial powers which were placed in the hands of Judges. Courts of circuit were established and Howrah along with Burdwan was included in the Calcutta circuit. The decennial settlement was also made permanent in 1793 and was extended to Burdwan which then administratively included the district of Howrah.

"But if it be asked why I have included Howrah in Burdwan," writes C. N. Banerjei by way of explanation, "in preference to attaching it to the 24-Pergunnahs, the officers of which district have had, from time to time, a great deal to do with Howrah, I have to advance the sale in 1800 A.D. of certain lands, now comprised in the Howrah Maidan, by the Collector of Burdwan, for recovery of arrears of rent due by the defaulting proprietor Rughoo Nath Sing. If the district were not attached to Burdwan, it cannot be conceived why the Collector of Burdwan should take steps to realize the rents due. Again, between the years 1793 and 1800 A.D., the non-existence of a Civil court in the 24-Pergunnahs shows at once that Howrah was either attached to Calcutta, or Burdwan which comprised Hooghly, but the laws which obtain in Howrah being such as are not administered in Calcutta, fairly lead to the inference that Howrah was a part of a Mofussil district, and which district could be none other than Burdwan. The only way I can reconcile the fact of the Judge and Magistrate of 24-Pergunnahs having anything to do with Howrah, is by the supposition that the thannahs of Howrah, Seebpore, and Sulkea were placed under the 24-Pergunnahs' jurisdiction in Civil and Magisterial matters, under the authority of Section 3 of Regulation VIII of 1806 which lays down that 'the civil jurisdiction of the Court (of 24-Pergunnahs established by that Regulation) shall extend to the whole of the Pergunnahs and Mehals which are now, or may be hereafter, placed under the Criminal and Police jurisdiction of the Magistrate of the 24-Pergunnahs, which are not situated within the limits of the town of Calcutta.' "[2]

The history of subsequent administrative changes in the district has been described by C. N. Banerjei as follows: "Howrah had risen to so much importance notwithstanding that the Railway had not opened that, in 1841 there was a proposal to appoint a separate Joint-Magistrate for Howrah, Sulkea and Seebpore. Hitherto the Magis-

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[1] loc. cit.
[2] ibid. pp. 27-8.

trate of the 24-Pergunnahs used to come over once a week. All criminal cases were however adjudicated at Alipore. It took two years ere the proposal was matured. Meanwhile two European Seargents were appointed to look after public safety. The Government, in the early part of 1843, determined to appoint a Magistrate to the station in lieu of a Joint Magistrate, on a salary of Rs. 900 a month only. The new jurisdiction thus formed, comprised the thannahs of Sulkea in 24 Pergunnahs, and Ampta, Rajapore, Oolooberiah, Khotra and Bagnan in Hooghly, but the civil and fiscal jurisdictions remained as heretofore attached to Hooghly. Mr. W. Taylor of the Bengal Civil Service was the first Magistrate here. . . . He was directed to make his commitments to the Sessions of the 24-Pergunnahs, the Judge of which district also sat on appeals preferred from the Magistrate's decisions. . . . In 1845, the recently formed Magistracy of Howrah received an accession of territorial jurisdiction by the transfer to it from Hooghly of certain villages south of Ishra (Rishra ?—Ed.) and Kishtorampore belonging to the thannah of Boydyobattee. In 1846, the Magisterial jurisdiction was further increased by half of the river on its western side. . . . Between this year and 1861, a few thannahs were added and taken away. . . .

"Up to 1863 the Howrah Magistracy remained legally attached to the 24-Pergunnahs district. I say, legally attached, because no provision was made to attach it to the jurisdiction of any other Judge, when the river Hooghly was made by the Government of India the western boundary of the 24-Pergunnahs district. The error was discovered in 1864 and was remedied by attaching to Hooghly the thannahs of which the district was comprised. The Additional Judge of 24-Pergunnahs and Hooghly was vested in that year with power to hold periodical Sessions in Howrah with the aid of a Jury, a special Act being passed to legalize whatever had been done in the *interim*.

"The importance to which Howrah, from being a small village, had risen during the lapse of a century, and from the heavy work devolving on the Sessions Judge of 24-Pergunnahs and the Civil Judge of Hooghly (for the former had all the duties arising from Magisterial work and the latter the duties arising from the lately established Deputy Collectorate for adjudication of Act X cases, and form the Moonsiffs' courts), led in 1861 to a proposal by the late Sudder Dewanny Court to appoint a Civil and Sessions Judge for Howrah, who should also be Additional Judge of 24-Pergunnahs and Hooghly, in lieu of the Additional Judge, trying commitments made by the Dacoity Department. It was also then proposed to vest the Small Cause Court Judge, lately appointed, with the powers of a Principal Sudder Ameen and to locate these officers in the circuit house. The necessity was admitted by the Government but the proposal quietly died away, to be renewed in 1865 with a modification, *viz*, the creation of a fiscal jurisdiction for Howrah, but like the preceding one was

nipped in the bud. Again in 1867, a fresh proposal was laid before Government to make Howrah a separate district for all purposes; revenue, civil, and magisterial, with the exception of a regular treasury; but owing to the expenses involved not being worth the change, the subject was dropped."[1]

Though a Magistrate was appointed exclusively for Howrah as early as in the forties of the 19th century, it did not become a full-fledged and independent district until a long time thereafter. Even in 1909, when the last Gazetteer of the district was written by O'Malley, the administration of revenue and civil justice fell within the jurisdiction of Hooghly. The District and Sessions Judge of Howrah used to be designated as an Additional District and Sessions Judge of Hooghly at Howrah up to 1937, the separation of the administration of civil justice in the two districts being completed under Notification No. 9150-J of December 8, 1937. As a result, a separate judgeship was created at Howrah with effect from January 1, 1938.[2] Before this, the Revenue Departments of the Collectorate had been organized in 1920 when the Collector of Howrah became independent of the Collector of Hooghly in these matters.[3]

In 1959, Uday Narayanpur was constituted a separate police station with seventy-five *mauzās* formerly belonging to the Amta thana.[4] Finally, in 1963 the district was taken away from the Burdwan Division and attached to the Presidency Division.[5]

TOPOGRAPHY

Natural divisions: configuration, main lines of natural drainage, slope etc.

"Hemmed in between the Hooghly (Bhagirathi) on the east and the Rupnarayan on the west, and intersected by the Damodar, the Howrah district consists of a flat alluvial plain, with a gradual, almost imperceptible, rise towards the north and north-west, the general flow of drainage being consequently to the south and south-east. The product of these rivers and their branches, it comprises two main division, viz., the raised river banks and the large marshes or lowlands that separate them. In this way three distinct tracts are formed, each with a depression in the centre bounded by the high banks of the rivers, viz., an eastern tract stretching away from the Hooghly (Bhagirathi) and its branch the Saraswati, a central tract traversed by the Damodar and its branch the Kana Damodar or Kausiki, and a western tract consisting of the country between the Damodar and the Rupnarayan. The upper courses of the Damodar and the Rup-

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[1] ibid. pp. 28-31.

[2] A. Mitra—District Handbook: Howrah. Census 1951, West Bengal. Calcutta, 1953. p.i. Also, report received from the District & Sessions Judge, Howrah.

[3] loc. cit.

[4] *Vide*, Notification No. 2702 Pl. dated June 17, 1959 of the Home (Police) Department, Government of West Bengal.

[5] The details of the *mauzās* forming Uday Narayanpur P.S. have been mentioned earlier. *Vide*, Notification dated March 4, 1963 of the Home (General Administration) Department, Government of West Bengal.

narayan are somewhat higher than the Hooghly (Bhagirathi); and in the intervening country are numerous watercourses or creeks, called *khals*, which run dry or are very shallow in the hot weather."[1] The characteristic feature of this riverine landscape is the levee formations along all the rivers in between which there are extensive swamps (*jheels*) or depressions (*jalās*) forming vast sheets of water during the rains. The eastern part of Howrah city, for instance, is situated on the levee formed by the Bhagirathi while its western part occupies a portion of the Dankuni and Howrah swamps extending from north to south between the Bhagirathi and the Saraswati. The Rajapur swamp lies between the Saraswati and the Kana Damodar while the Amta swamp stretches between the Kana Damodar and the Damodar. "There is little high land except on the banks of the rivers, whose windings the villages follow. These villages have a quiet beauty of their own, being surrounded by a dark belt of mangoes, feathery palms and clustering bamboos, while rich rice fields stretch to the verge of the reed-bordered marshes. Between Makardah and Bargachhia, however, the country is so low that for miles not a single house or tree is visible, the monotonous sameness of this flat fen being broken only by the banks of the Rajapur channel."[2] South of the South-Eastern Railway, from Kolaghat to Uluberia, the landscape changes perceptibly. The channels of all the three big rivers become broader, their currents stronger requiring embankments to be built along them for preventing inundations. The villages are more sparsely situated, roads are fewer in number and the many watercourses or paths along the embankments are the chief avenues of communication.

As regards Howrah city and its environs, the oldest record from which their physiographic features can be reliably determined is Mark Wood's map of 1782-83, which, according to Col. Kyd's manuscript of 1790, may be considered as fairly accurate. There are also other contemporary and subsequent maps and records. It appears from these documents that the entire river-bank, except the projecting built-up portion now occupied by the Howrah Bridge approach, was formerly comparatively low lying. The bank on the Ramkrishnapur-Sibpur side was much broader in extent and sloping towards the river. The southern part of it had a number of stagnant pools and a long shoal alongside it. C. N. Banerjei described the riverside of Howrah around 1750 as "a line of mud banks reeking with malaria . . . jungle lining the shore, the abode of snakes and alligators."[3] The channel on the Howrah side was known to have been deeper before the days of Job Charnock who, however, found the river deeper on the Calcutta side. "This change is accounted for, from the fact of a sand bank

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 2.
[2] loc. cit.
[3] C. N. Banerjei—op. cit. pp. 18-9.

called the 'Sumatra Sand Bank' having formed by the sinking of the ship 'Sumatra' at the projecting angle of the Howrah ghat."[1]

The relatively higher lands were occupied by villages of which Sibpur, Salkia, Bamangachi, Chakraberia, Santragachi etc. form important localities of the town. They were interspersed with low-lying marshes and paddy fields. Big swamps, since considerably reduced, stretched over areas now known as Paddapukur, Kasundia etc. From their trends as also from the alignments of their outlets, which were mostly from the north-west to the south-east, the existence of former channels across the site presently occupied by the city may be inferred. One of them extended to the present course of the Bhagirathi through the former village of Harirah and two other outlets near Ramkrishnapur and Shalimar drained the waters of the marsh in the present Paddapukur area. The channel near Ramkrishnapur is completely obliterated now while a branch of the other near Shalimar still exists as Rani Swarnamoyee Khal; the other branch, which was the main outlet, having been blocked by the Shalimar Road and the railway yards. It forms a small creek of the Bhagirathi at present.

The average height of the riverside areas, for which Bench Marks are available, varies from 15 to 20 feet above sea-level. The central portion of this strip near the Howrah Maidan is the highest with an elevation of about 20 feet above sea-level, while the Botanic Gardens area with an elevation of about 15 feet is the lowest. The drainage of the riverside area flows into the Bhagirathi while that on the side away from the river flows into the low-lying marshes which drain into the river partly through the channel further west. A large amount, however, remains stagnant due to unplanned construction of railways, roads and buildings and forms a conspicuous feature of the city's landscape. The riverside area too experiences the same disadvantages at places like North Shalimar.

RIVER SYSTEM AND WATER RESOURCES

Main rivers and tributaries

The principal rivers of the district are the Bhagirathi and its tributary, the Saraswati; the Damodar and its two branches, the Kana Damodar (or Kausiki) and the Old Damodar; and the Rupnarayan. The district is also intersected by numerous *khāls* or creeks. The tributaries of the Bhagirathi are mostly tidal offshoots navigable by small country boats for short distances inland.[2] The Sankrail and Sijberia *khāls* are the lower reaches of the Saraswati and the Kana Damodar respectively. The Damodar has about twelve distributarics and the Rupnarayan about half that number, the more important

[1] ibid. p. 4 and W. H. Carey—The Good Old Days of Hon'ble John Company, Vol. I. p. 55.

[2] In 1909, Bali, Rajganj, Sankrail, Sijberia and Champa *khāls* were important navigable channels, *vide*, L. S. S. O'Malley and M. Chakravarti—op. cit. 1909.

among the former being the Madaria, Banspati and Gaighata (or Giaghata) *khāls* and the Hoorhoora and Bakshi *khāls* among the latter. The Bakshi and the Gaighata *khāls* combine to form a tortuous channel between the Damodar and the Rupnarayan, which is much used by country boats. In the southern part of the district, the more important of such *khāls* joining the two rivers systems are the Uluberia, Lahiripara and Nakali *khāls*. Towards the north, above 22°30′ N, the *khāls* have a general north-south course while in the south it is west-east.

The Bhagirathi

The Bhagirathi is the main westerly channel by which the waters of the Ganges enter the Bay of Bengal. It is so named after the legendary king Bhagirath, who, according to Hindu mythology, induced the Ganga to come down from heaven and bring salvation through her divine touch to 60,000 of his ancestors who had been reduced to ashes by the sage Kapila. The legend is well known and need not be retold here.[1] The river is also held sacred among Buddhists. Warren Hastings allowed the Tashi Lama of Tibet to build a monastery on its bank at Ghusuri which may still be seen at Bhotbagan.[2]

Historical associations of the Bhagirathi

The absence of the name of the Bhagirathi in the Vedic literature indicates its unimportance in the life of the Aryans of that age.[3] Although paleolithic and neolithic sites have been found in the adjacent Midnapur district, it would not be safe to infer that paleolithic man existed in Howrah district.[4]

Nothing except a very broad (and inaccurate) idea of the riverine and forested tracts of lower Bengal can be obtained from ancient literature.[5] The changes in the courses of the rivers, particularly of the Bhagirathi, are, however, written on the land surface of the district. Its main and ancient course was further west of the Saraswati according to Rennell who observed in 1783: "I suspect that its the then course, after passing Satgong, was by way of Adampur, Omptah and Tamlook; and that the river called the old Ganges, was a part of its course and received that name whilst the circumstance of the change was fresh in the memory of the people. The appearance of the country between Satgong and Tamlook countenances such an opinion."[6]

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[1] N. K. Bhattasali thinks that "the mouth of the Ganges had become silted up even in the days of Bhagiratha (approximately 2,000 B.C.), and it is through the gigantic labours of that monarch that this course was given fresh lease of life." (*Vide*, N. K. Bhattasali—'Antiquity of Lower Ganges and its Courses', in Science and Culture. November, 1941. p. 44 ff.)

[2] For further details of the Bhotbagan monastery, please see Chapters III and XVI.

[3] A. B. Chatterjee—'The Hooghly River and its West Bank: A Study in Historical Geography' in the Geographical Review of India, Vol. XXV, No. 3. September 1963. Calcutta. p. 164.

[4] R. K. Mukherjee—The Changing Face of Bengal. Calcutta, 1938. p. 245.

[5] There is nothing to prove that before the 15th century there was a sufficient fund of knowledge about the river geography of the Howrah district. The scanty evidence of *Pavandutam*, the inscriptions of the Sena kings and such other materials corroborate this conclusion.

[6] J. Rennell—Memoirs of a Map of Hindoostan. 1783. p. 45.

UDAY
NARAYANPUR
AMTA
BAGNAN
SYAMPUR
PREPARED BY
DILIP K KHAN

When the epicontinental sea covered the tract now forming the Howrah district, the Bhagirathi joined the various sub-deltas of the Chotanagpur rivers and pushed the Gangetic delta towards the sea and thus intercepted the peninsular streams, which, in their turn, pushed the Bhagirathi to the east by the detritus they carried.[1] The sudden bends of the Bhagirathi below Kalna, of the Damodar below Burdwan, of the Darakeswar near Arambagh, of the Silai above Ghatal and of the Haldia near the saline soil limit seem to justify this conclusion. These abrupt bends were most probably the debouching points of the Chotanagpur rivers into the ancient channel of the Bhagirathi or the epicontinental sea. As the delta face advanced southwards the braided channels of the Bhagirathi vanished. It is likely that the meandering character of the rivers of Howrah became more pronounced in very recent times and succeeded the braided stream conditions (which prevailed a few thousand years ago) when excessive load rendered lateral erosion and meandering impossible. So far as can be ascertained from early traditions (the existence of old beds and of villages and towns with old histories on the banks of the river etc.), the main stream of the Bhagirathi from the early 18th century flowed due south down the course of the present channel.[2] Nothing is definitely known, however, about the now-decayed Saraswati which is said to have been in the mediaeval period, the main channel of the Bhagirathi below Satgaon.[3] In more recent times the Bhagirathi (or one of its braided courses?) used to flow through a part of the present Tolly's Nullah through the Rajapur-Baruipur area (in 24-Parganas) where this silted up old bed may still be traced. The Bhagirathi has most probably usurped a part of the Saraswati channel below Sankrail which again was a comparatively new channel of the latter river.[4] Judging from the low banks and unsettled land, it seems improbable that the heavily silt-laden Bhagirathi had all along been flowing through its present channel or that this channel was as

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[1] O. H. K. Spate—India and Pakistan. London, 1956. p. 537.

[2] In Chapter XIII on Education and Culture one will find that between the 9th and the 13th centuries the Damodar-Rupnarayan doab witnessed the growth of quite a few seats of learning. The Damodar-Bhagirathi doab or even the Saraswati-Bhagirathi doab, on the other hand did not witness the growth of any settlement (excepting Betor on the Saraswati) till the early 18th century. Khurut in Howrah city, Panchpara in Sankrail P.S. and Jhorhat on the Saraswati were the only places which came into prominence since the early 18th century.

[3] W. W. Hunter—A Statistical Account of Bengal, Vol. III. London, 1876. p. 262.

[4] From maps of Jao de Barros (1552-1613), Van den Broucke (1660), Blaev (1645-1650) and Mark Wood (1782-83) it seems that the Bhagirathi in its lower course used to fall into the Saraswati a couple of miles below Betor. According to Sherwill, however, even as late as in 1857, a former branch of the Saraswati could be traced from Chanditala past Amta into the Damodar and the Rupnarayan to the sea. Rennell has also referred to this old course of the Saraswati. The Bhagirathi channel below Hooghly Point gives the appearance of being really a continuation of the Rupnarayan and was probably formed at a very early age by the main branch of the Bhagirathi which is presumed at one time to have flowed past Tamluk. The Bhagirathi above Hooghly Point was probably then a smaller branch of tributary of the main channel.

active as that of the Saraswati in the upper reaches of which old riverine settlements have been discovered.

Betor figured in the maps of Jao de Barros and Blaev (first half of the 17th century) but not in Van den Broucke's (second half of the 17th century) and later maps. In the latter part of the 17th century two new settlements had sprung up at Salkia and Thana Makua. At the latter place, immediately south of the present Botanic Gardens at Sibpur, Pratapaditya, one of the twelve big chiefs of Bengal, had raised a mud-fort in the 16th century to protect the inhabitants from the depredations of the Arrakanese and Portuguese pirates and slave traders.[1] The origin of the city of Howrah may be traced to these strategic settlements which, owing to the better protection that they offered to the inhabitants, attracted a number of Brahmin families from Jessore, Tribeni, Neemta and Halisahar who initiated the material prosperity and cultural advancement of the town.[2]

The erection of salt *golahs* (warehouses) at Salkia during the time of the East India Company indicates its growing importance.[3] In fact, the southern part of Salkia came to be known as Golabari because of these salt godowns. With the rapid growth of Calcutta on the east bank, the settlements on the other side of the river became its subsidiaries. The mud-docks, as a nucleus of industries, were started before 1706 and by that time Betor seems to have declined altogether.[4] Towards the end of the 18th century, the riverside started changing its rural character with the establishment of a number of distilleries, indigo factories and rope works.[5] This period was also marked by the development of ship-building which culminated, a century later, in the creation of the Calcutta Port Trust in 1869 and the wet dock in 1884.

Mention of the present course of the Bhagirathi below Tolly's Nullah as *Kāṭā-Gaṅgā*,[6] meaning the excavated channel of the Ganges, recalls the cutting and deepening of the bed of the river by the Dutch engineers during the reign of Ali Verdi Khan (middle of the 18th century).[7] That the portion of its present course above Betor

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[1] A. K. Ray—Census of India. Calcutta, 1901. p. 13; S. Sastri—*Mahārājā Pratāpāditya* (in Bengali). Calcutta, 1896. p. 67. According to some writers, the Mughals built the Tanna fort during the reign of Akbar.

[2] A. K. Ray—op. cit. p. 13.

[3] T. Chatterjee—The Visvabharati Quarterly, Vol. 24, No. 2. 1958. p. 119.

[4] The Calcutta Review, Vol. 18. 1852. p. 310 and A. Hamilton—A New Account of the East Indies. London, 1744. p. 12.

[5] Mark Wood's map of 1782-83 and Upjohn's map of 1792-93 and L.S.S. O'Malley—op. cit. pp. 153-4.

[6] The Calcutta Review, Vol. XVIII. p. 287.

[7] A. K. Ray—op. cit. p. 12.

"The term Kata (or cut) Ganga, as given by Sherwill to the Hooghly (Bhagirathi) below Sankrail, appears to be a misnomer and really refers to that portion between the Tolly's Nullah and Sankrail which is supposed to have been cut through. ...The present peculiar configuration of the Hooghly (Bhagirathi) which widens considerably just below Sankrail at the old Saraswati entrance, affords additional confirmation. The left bank here is concave and thus suggests a deep water channel having at some time run along it, which

was the main channel of the river since the beginning of the 16th century[1] is evident from a number of old texts and popular belief. R. K. Mukherjee is of the opinion that the main course of the Bhagirathi flowed through the Saraswati "from at least the 12th century to the 16th century."[2] The *Manasāmangal* of Bipradas (*circa* 1495) and *Chandimangal* of Mukundaram (1533-1600) bear out that merchants avoided the Saraswati course to Hijli and followed the Adi Ganga (Bhagirathi) instead. "It was not because it was too shallow, but because it was too deep, so deep as to be readily accessible to the galliasses of the Arracanese pirates."[3] During the 16th century the combined waters of the Saraswati and the Damodar entered the Ganges at Betor where Portuguese ships used to anchor.[4] Within the 17th century, however, the mouths of the Saraswati, Rupnarayan and Adi Ganga became separate and the Damodar-Saraswati delta disappeared.[5] Very interestingly this brought an improvement of the Bhagirathi channel which coincided with the growth of European settlements on its banks and the decline of Portuguese piracy. By 1757 the Bhagirathi channel had improved so much that under Admiral Watson three or four 64 and 66-gun British men-of-war sailed up the river and captured the French fort at Chandernagore. In the sixties of the 17th century, the English with the help of a small vessel named 'Diligence' started taking soundings to locate the shoals, sand-bars and the deeper channel of the river on the charts. This was the beginning of the Bengal Pilot Service, which, after about 300 years of service, is known as the Hooghly Pilot Service since 1948.

Nature of the bed of the Bhagirathi; changes in its courses and profiles; volume of water and seasonal variation

That the Bhagirathi has shifted eastward from the Howrah side during the first half of the 19th century is evident from the fact that in course of 54 years, namely from A.D. 1800 to 1854, the river bank receded 100 ft. from Salkia, thereby narrowing the channel considerably. From the excavated remains of boats found at Salkia and Sibpur, C. N. Banerjei infers that the river was formerly flowing farther west than it was in his time.[6] The presence of a watershed inside Howrah town about 400 ft. to the west of the Grand Trunk Road seems to indicate that it was the earliest right bank levee of the

can be most naturally explained by its having been the continuation of the Saraswati channel from Sankrail, now maintained by the flood tide current. The present deep channel along the right bank is a continuation of the Hooghly (Bhagirathi) channel which would have cut across the other at right angles, and they merge at the end of the reach in a deep hole where the cross-sectional area is abnormal, being much greater than in any part between Calcutta and Fulta, in spite of the natural tendency of the river to enlarge in the lower reaches" (*Vide*, C. J. Stevenson-Moore and others--Report on the Hooghly River and its Headwaters, Vol. I. Calcutta, 1919. p. 31).

[1] C. J. Stevenson-Moore and others—Report on the Hooghly River and its Headwaters, Vol. I, Calcutta, 1919. p. 32.

[2] R. K. Mukherjee—The Changing Face of Bengal. Calcutta, 1938. p. 141.

[3] C. R. Wilson—Early Annals of the English in Bengal. p. 133.

[4] R. K. Mukherjee—op. cit. p. 173.

[5] ibid. p. 174.

[6] C. N. Banerjei—op. cit. p. 5.

Bhagirathi at this point. The eastward shift of the river resulted in alluvion at Ghusuri, Ramkrishnapur and Sibpur.

The Bhagirathi touches the district at the outfall of the Baly Khal, just north of the Vivekananda Bridge. Between this point and the Howrah Bridge there is single meander spar at Malipanchghara where the width of the channel is double that at the Howrah Bridge. After flowing past Ghusuri and Fort William the river turns due west at Shalimar Point for a distance of about 6 miles as far as Hangman Point, describes a concave arc, flows due south up to Munikhali, forms a meander neck and meander bars inside the bend and then pursues a south-easterly course as far as Uluberia where it traces a wide concave arc followed by a similar convex arc lower down at Hiragunj Point (opposite Moyapur) and then flows in an ever widening channel almost due south, receiving the Damodar opposite Falta Point and the Rupnarayan opposite Hooghly Point. "These great tributaries deflect the stream to the east for no less than 8 miles and have set up in it, just above the mouth of the Rupnarayan, the dreaded moving shoals known as the James and Mary Sands.

"The deep-channel alternates from left to right and *vice versa* according to the windings of the river, except where deflected by the large tributaries which debouch into it at the southern limit of this district. Proceeding from Howrah Bridge, the deep channel runs on the Calcutta side in the Calcutta Reach past the Fort and Kidderpore to Garden Reach. At Rajganj, opposite Hangman Point, it crosses over to the Howrah side, and follows the Sankrail Reach as far as Melancholy (Manikhali) Point. It then zigzags from left to right at each bend, viz., Jarmaker's Reach (left) to Coffrey Reach (right) and to Budge-Budge Reach (left). Thence a long bend brings the channel to the right through the Uluberia and Mayapur Reaches, the latter of which has a dangerous bar. The subsequent changes are to Rayapur Reach (left), to Hog River Reach (right), and thence to the Fisherman's Anchorage or Reach (left). The influx of the Damodar now causes it to shoal up on the right bank, forming the Falta Sands in the centre, so that there is only a narrow channel, the Falta Reach, on the left bank. The next reaches are Nainan and Nurpur, both on the left, and after them come the notorious James and Mary Sands, with a narrow channel on each side called the Eastern Gut and the Western Gut."[1]

Influence of tides and freshets on the Bhagirathi

The lower Bhagirathi is under the influence of strong tidal forces. The banks are durable and the river, therefore, carries a heavier bed load and has a fixed regimen, the variations of which, in places, are oscillatory in accordance with the seasonal predominance of the opposing tidal currents. The channel has been chiefly moulded by the ebb current and its axes ordinarily follow a succession of con-

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 4-5.

nected, reverse, parabolic curves with deep water grazing the concave banks and shallowing at the crossings where the current swings from one bight to the next leaving sand banks along the convex faces of the bends. The sharpest curves are at Sankrail and Munikhali where the radii of reverse curvatures are only 6,000 and 6,700 feet respectively, and as the river width is restricted at Munikhali Point, the deep water channels merge here with each other. Other curves have radii varying between 7,000 feet at Cossipore and 22,200 feet at Diamond Harbour.

The flood tides flowing in the reverse direction send up relatively larger volumes of water along the shallower parts of the channel thus leading to erosion of the convex banks as also deposition in their vicinity. The greater hydraulic depth created by the ebb in the bights, draws the main axis of the flood tide into the line of the ebb and maintains the deep water channels at the bends. At the crossings, where the lines again diverge, both currents lose the guiding control of the banks and neither is able individually to carry the deep channel across the river, though, if their main axes are nearly coincident as at Fisherman's Point, Kafri, Panchpara and Matiabruz crossings, a satisfactory depth is established by the combined action. Ordinarily, however, where easy curves follow each other, the main axes diverge to a greater extent, but if the width at the crossing is restricted, the lead of the uncontrolled current to the opposite bight is short and a fairly good crossing depth is maintained, as at Pujali and Pir Serang. On the other hand, if undue widening takes place at the crossing, the divergence of the main axes of the flood and ebb current naturally becomes considerable and an oval-shaped neutral zone is created between them; the lead of the body of the main current across the river is then longer, permitting it to fan out, which, together with the opposite influence of the reverse tide, results in a bar being formed as at Moyapur and Royapur. Under natural conditions the line of deepest water oscillates between the upper and lower limits of the crossing according to the season, as the flood or ebb tide predominates.

When the concave bank is juxtaposed to a sharp bend, the axes of the flood and ebb currents diverge until they are nearly at right angles to each other; the currents are then in direct opposition, each striving continually to undo the work of the other. The Eastern Gut Bar clearly exhibits the divergent action of these opposing currents in the Western and Eastern Guts respectively, with the neutral zone of Makrapatti sands lying between them. The same situation occurs at Munikhali Point, but, as stated before, the lead of the uncontrolled ebb current is so short here that the deep water channels of the adjoining concaves merge into each other. However, even here at the height of the dry season, the greater force of the flood tide enables it at times to push the head of the Munikhali sands into the channel at Munikhali Point, where the enfeebled ebb current cannot deal

with it and a shallow crossing is then formed. In the freshet season the reinforced swing of the ebb current enables it to carry the deep channel on to the deep waters of the opposite concaves at both the places.

It is thus evident that the constancy of the Bhagirathi channel depends more or less on the harmonious interplay of the ebb and flood currents, as modified by the curvature of the banks and the width of the river-bed. The two tidal forces, apart from their daily effect, have an annual see-saw action. Between the middle of August and middle of September, the increased fresh water discharge raises the mean-level of the river to its greatest height when the slope is also at its maximum. Subsequently, owing to the dearth of fresh water-supply and the effects of the gradual relative fall of atmospheric pressure at the head of the Bay from the end of January, the flood tide increases in importance reaching a maximum from the middle of February to the middle of April. With the increase of discharge due to occasional early rainfall and the weakening of actual tidal effect, the forces are fairly well balanced in May and June till the freshets completely overpowers the flood tide.

The channels respond to these varying actions of the tides. In the freshets the heads of the meander bars below the points on the convex sides are washed away and the tails extend so that the whole bar moves bodily downstream. Conversely, when the flood tides gain strength in the dry season the heads of the sands again tend to encroach on the crossings. The longitudinal axis, or the thread of the channel, accordingly fluctuates up and downstream at the crossings. The purely ebb tide channels such as the Eastern Gut, Sankrail Bight and Munikhali Crossing generally respond immediately to the increased flow and deepen with the onset of the freshets. In other normal crossings deterioration usually takes place through the formation of 'lumps' (which occur in the earlier half of the freshets) but improvement is noticed by the end of the season when the channels are scoured through, so that the upper reach of the river is generally in its best condition in November and December.

The river expands uniformly in width from Achipur Point downstream. Above Hiraganj Point the right bank (which is the guide bank for the ebb current) trends away from the crossing and so loses its directive effect on the flow of the current to the opposite bank. Though the current here is relatively stronger, the actual erosive effect on the bed on any particular line of the crossing is, therefore, somewhat less than the effect of the flood-tide during the dry season on the upper crossing where the width contracts, permitting better control and more concentration of the main body of the current.

The conditions at the James and Mary Reach[1] are abnormal owing

[1] L. S. S. O'Malley and M. Chakravarti wrote at pages 170-71 of the old Bengal District Gazetteers, Howrah (1909): "The shoals appear under the present name 'James and Mary Sands' in the Pilot Chart of 1703. The name is

to defective alignment and the debouching of the two tributaries, Damodar and Rupnarayan, at the top and bottom respectively of this reach. The main body of the Bhagirathi ebb current under the influence of the swing of the Fulta bight tends to shoot across the river towards the P.W.D. Inspection Bungalow on the right bank between the confluence of the Damodar and Sibganj Points and even with the counteracting influences, this bank at present shows the beginnings of a reverse concave which would develop if the Damodar's action were removed. However, the Damodar ebb current issuing from the right bank strikes the Bhagirathi current at right angles and, helped by the secondary current flowing down the back of Fulta sand, guides the channel from midstream towards the left bank to join the natural flood-tide channel and a double similar concave arc is formed here. The combined action, with the contraction at this place, scours a hole at Fulta Point, but as the current below has no definite guiding control, shallow water appears during the freshet season when the natural action of the flood-tide is unable to disperse it. When the Bhagirathi freshet is very strong, the whole channel is naturally carried westward where the ebb spends its energy cutting into the edge of Sibganj sands and in endeavouring to force passages through the head of the Nurpur or Makrapatti sands. Strong eddies are generated in this reach and 'lumps' form in midstream which, generally about September, coalesce with an extension of the tail of the sands lying close inshore below Fulta Point, and this forms a bar running diagonally across the river. The depth on this ridge is very uneven and as the freshet channel widens, it is thrust in towards the left bank and when conditions are very bad. joins the flat on that side. With the increasing strength of the flood-tide, the channel improves and is usually clear again in December.

The formation of the Eastern Gut Bar is chiefly due to the antagonistic action of the flood current, but there are other predisposing causes as well. In the dry season the enfeebled ebb current is further weakened by the protrusion, though slight, of the meander neck at Nurpur. It results in the shallowing of water in the Nurpur Reach. Secondly, the outflow of the Rupnarayan at right angles to the bar, holds back the Bhagirathi current to some extent. In the dry season, owing to the large tidal basin of the Rupnarayan, this effect is more pronounced. Lastly, the flow of the flood-tide across the ebb channel tends to push the head of the Bhagirathi sand into the Eastern Gut.

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evidently derived from that of a ship (called after James II and his queen Mary of Modena), which was lost here in September 1694. 'The *Royall James and Mary* arrived in Ballasore Road from the west coast in August ...but coming up the river of Hughly on the 24th September, she fell on a sand on this side Tumbolee Point and was unfortunately lost, for she immediately oversett and broke her back, with the loss of four or five men's lives." (*Vide*, Bengal Letter to Court, 14th December 1694, l.c., Yule, II, 133. Tumbolee Point is shown in the Pilot Chart 1703 at the present site of Fort Mornington Point).

In spite of these reactionary influences the ebb current is powerful enough in the freshet season to force a channel through the 18-feet bar and the Eastern Gut usually remains open till the end of November. Subsequently, the bar forms again and assumes worst proportions at the end of the dry season from April to June. Even then there is a downstream prolongation of the tail of the Makrapatti sands which aids in the formation of the bar.[1]

The Western Gut of the James and Mary Reach is a purely flood-tide channel. The great erosive power of the flood current is evidenced in the deep channel scoured out from Fort Mornington Point to above Hope's Mark, but it is then speedily dissipated and, rarely even in the dry season, leads a channel of even six feet depth across into the deep water of the Ninan Channel owing to the long lead for the uncontrolled current. The last crossing in this section is at Kukurahati. The combined flow of the Rupnarayan and the Bhagirathi scours out a very deep channel along the right bank below Geonkhali and at the end of the concave bank above Luff Point the greatest depth in the whole course of the Bhagirathi is found, reaching to 130 feet below datum.

The high-water width of the river from Calcutta southwards is very irregular, usually contracting at the points and expanding at the bights. Excessive broadening of the bed is noticed at Cossipur and Brul and particularly at Sankrail Bight where the widening is possibly a relic of the old Saraswati river, as already mentioned. Considerable expansion occurs again at Fulta above the entrance of the Damodar while the smallest widths are 1,200 feet at Garden House Point and 1,350 feet at Howrah Bridge. The bight widths increase from 3,500 feet at Cossipur to 13,300 feet at Diamond Harbour. Datum widths rise and fall more regularly, the Point widths increasing generally from 1,030 feet at Garden House Point to 6,000 feet at Kantabaria Point. The considerable reduction of datum widths in the bights at Cossipur and Sankrail is worthy of notice.

Tides

The configuration at the entrance from the Bay with deep approach channels leading into a natural funnel shaped estuary is very favourable for easy propagation of "the tides, which rise at Kidderpore 15¾ feet above the lowest tide-level in spring and 10¾ feet in neap-tides. During floods the mean springs rise as high as 19¾ feet and the

[1] An explanation of the extension of the Makrapatti sands appears to be as follows: The centrifugal force of the flood current raises the water level at Fort Mornington Point and depresses it at Hooghly Point, resulting in eddy action past the latter on the flood-tide. Navigation at the Eastern Gut is, therefore, difficult. The consequence of this would be, as demonstrated in 1876 by Professor James Thomson, a vertical movement in which the surface current towards Fort Mornington Point would be changed to a transverse secondary current along the bottom. This would sweep over the Makrapatti sand and meeting the eddy current in Nurpur Reach naturally tend to carry the tail of the Makrapatti sand down and across to the head of the Hooghly sand.

mean neaps 14½ feet. The tide travels to Calcutta from the Sagar Roads in 4 hours and 9 minutes, and from Diamond Harbour in a little more than two hours, running at the rate of 17 miles an hour at Diamond Harbour, 22 miles at Moyapur and 18 miles an hour at Fort William. In addition to tides, the Hooghly waters are affected by several other factors, such as the seasonable low readings of the barometer between March and September, the forcing of water into the river by strong southerly winds from March to August and out of it by northerly winds from November to February, and, lastly, by the floods which bring down a large body of fresh water from July to October. The difference due to these causes is about four feet, the highest level being in August and September, and the lowest in February and March.

"Bores of more or less violence occur at perigee springs especially in February, March and April. The bore is not felt much until it enters the more tortuous and contracted reaches above Hooghly Point, where it not only capsizes and swamps boats that have not been hauled off into deep water in time, but also affects vessels at anchor, forcing them to run upstream of their anchors with straightened cables, more especially if there is a strong southerly breeze."[1]

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 6.

Table of approximate corrections to be applied to the predicted times at the Reference Stations named in the last column to find the times of high and low water at the following places on the Bhagirathi and their distances in nautical miles from Fort Point, Calcutta. (*Vide*, Tide Tables for the Hooghly River, 1965. pp. 71-2).

Name of Place	Nautical miles from Fort Point, Calcutta	Corrections for High Water Hrs.	Corrections for High Water Mins.	Corrections for Low Water Hrs.	Corrections for Low Water Mins.	Reference Station
Hooghly Point Semaphore	34	add 0	30	add 0	30	Diamond Harbour
Fulta Point	30.8	add 0	42	add 0	49	,,
Fulta Gauges	28.5	add 0	51	add 1	02	,,
Pukuria Point	26	add 1	00	add 1	16	,,
Pukuria Point	26	sub 1	08	sub 1	45	Garden Reach
Royapur Gauges	22.8	sub 0	56	sub 1	31	,,
Devil's Point	20	sub 0	46	sub 1	10	,,
Moyapur Semaphore	18.8	sub 0	41	sub 1	03	,,
Uluberia Khal	16.5	sub 0	35	sub 0	56	,,
Poojali Point	14.8	sub 0	31	sub 0	49	,,
Budge-Budge Telegraph Office	13	sub 0	27	sub 0	43	,,

Contd.

The spring tide high-water line reaches its maximum height usually at Hooghly Point and then falls steadily northwards up to the tidal limit at Kalna. The spring tide low-water line rises gradually from Balari to Hooghly Point from where there is a sharper slope to Fulta, after which it rises evenly northwards. In neap tides the high-water has a flatter slope, but it reaches its highest elevation at Hooghly Point after which it falls very gradually up the river. The neap tide low-water line is lowest between Haldia and Balari and then rises very slowly northwards.

Owing to the depth of water and the small range it is difficult to obtain satisfactory tidal observations at the Eastern Channel, but according to some taken in January and March 1910, the average rate of travel of the foot and head of the tidal wave to Upper Gaspar was about 50 miles an hour. Between Upper Gaspar and Balari the head of the wave travels faster than the foot of the wave. Between Balari and Hooghly Point the conditions are reversed and the foot of the wave travels faster than the head, the respective rates being 18.8 and 15.4 miles; from Hooghly Point to Moyapur the foot of the wave slackens its speed to 12.8 miles and the rate for the head of the wave is accelerated to 23.1 miles an hour; between Moyapur and

Name of Place	Nautical miles from Fort Point, Calcutta	Corrections for				Reference Station
		High Water		Low Water		
		Hrs.	Mins.	Hrs.	Mins.	
Pir Serang (Deepdale Wreck)	9.5	sub 0	19	sub 0	30	Garden Reach
Akra Semaphore	7.8	sub 0	15	sub 0	24	,,
Panchpara Boundary Pillar	4.5	sub 0	07	sub 0	12	,,
Garden House Point	3	sub 0	03	sub 0	06	,,
K. G. Dock (Tidal Observatory since 1932)	2	..		..		..
Kidderpore Dock Entrance	1	..		..		..
CALCUTTA (Fort Point)	0	add 0	10	add 0	04	Garden Reach
Howrah Bridge	1.8	add 0	10	add 0	12	,,
Willingdon Bridge (Bally)	6.5	add 0	28	add 0	30	,,

Notes: 1. The distances are given in nautical miles from Fort Point, Calcutta as measured through the channels now in use. To get distances in kilometers multiply by 1.845.

2. Between Kidderpore and Hooghly Point the average rate of travel of the tidal wave is one nautical mile in 2.9 minutes on the flood and 4.9 minutes on the ebb. Between Hooghly Point and Sagar the average rate is 3.1 on the flood and 4.3 on the ebb.

Calcutta the average rates are 15 miles and 21.4 miles respectively.[1] Above Calcutta the progress of the foot of the wave during the dry season is gradually retarded, slowing down to 14.3 miles between Calcutta and Konnagar. The period of the flood-tide from low-water to high-water decreases in its progress up the river. The interval is invariably shortest at the height of spring-tides and longest in the neaps.[2] The flood current at Hooghly Point during the early part of the dry season (January to March) runs up the river on an average for ¾ hour after high-water, the period of flow being shorter (½ hour) in spring-tides and longer (1 hour) in neaps. The period increases by the end of the season (May and June), when the current runs up for nearly an hour after high-water on the average, varying from about ¾ hour in springs to 1¼ hours in neaps.

At the height and the latter end of the freshet season (September to November), the current flows up, on an average, for a little more than half an hour, the period varying between 20 minutes and an hour in springs and neaps. There is an average interval of about 35 minutes of slack water after the current has ceased flowing. The ebb current at Hooghly Point runs down, on an average, for an hour after low-water in the freshet season, the interval varying between half an hour and one and a half hours. In the dry season from March to May, the downflow after low-water averages about 35 minutes. Slack water at this time generally supervenes for about quarter of an hour. In the freshets, there is an average slack water for 25 to 30 minutes after low-tide. At Howrah city during the dry season from December to May, the total duration of the flood current including the slack after high-water, averages about 5¼ hours, but in neap-tides the duration is sometimes increased to as much as 6½ hours, while in springs it is only 4¾ hours. The duration of the ebb, including slack, after low-water, averages about 7¼ hours in the dry season, being 6¾ hours to 7 hours in neap-tides and 7¼ to 7½ hours in springs.

The bores

The velocity of the current naturally varies considerably with the state of the tides and the seasons. Both flood and ebb currents attain maximum surface velocities of 5½ to 6 knots an hour in the channel during high spring tides and in the Hooghly Bight rushes of even 7¼ knots on the flood and 9 knots on the ebb, were observed off Luff Point at the height of the freshet season in 1904. During high spring

[1] These rates are averages, the actual movements of the wave on different occasions being very irregular.

[2] At Hooghly Point the intervals are from 4¾ to 6¼ hours, at Moyapur from 3¾ to 5½ hours, while at Calcutta it is only from 3 to 5½ hours. During the freshet season the interval is somewhat longer in neap-tides. Above Calcutta to Nadia, there is not much change in the period of flood-tide during the dry season, the interval being about 3¼ to 3½ hours, or generally longer than at Calcutta during springs, and shorter in neaps when it is about 5¼ hours. The ebb time interval from high-water to low-water varies from 6¼ hours in neaps to 7¼ hours in springs at Phuldobi. At Calcutta the period is 7 to 9 hours in the dry season and 8 to 9½ hours in the freshets.

tides in the dry season and also in the freshets, as the foot of the wave is retarded between Hooghly Point and Moyapur, the advancing face of the wave becomes steeper until a bore is occasionally generated. This usually makes its first appearance on Brul sand but increases in height over Hiraganj sand below Moyapur Bar. It rushes over the sands between Moyapur and Chinsura with a height of four to five feet, disappearing as it passes into the deeper water of the *crossings.*

The tides in the river exhibit a notable diurnal variation, the night tides being higher than those in the day during the dry season and *vice versa* in the freshets.

Another notable point is that the seasonal barometric range is greater at the head of the Bay than over its southern portion. The pressure is greatest in the cold weather and falls gradually till September and the relative difference over the northern and southern limits of the Bay decreases by 0.4 inch between December and May. This corresponds to a difference in sea-level of about 6 inches and results in a natural heaping up of the water in the upper portion of the Bay, which is also markedly influenced by the change in the direction of the wind from north-east to south-west. As a consequence of this, the river-level begins to rise from its lowest stage in February, the effect on the sea-level at the Sandheads being transmitted proportionally up the estuary. The two factors, namely the change of the monsoon and the extreme dryness of the season thus exercise considerable influence on tidal action in the Bhagirathi.

In a normal year the monthly mean river level is lowest about the middle of February when it stands at 8′ 4″. The level then rises gradually to 8′ 7⅛″ in March, 9′ 2¼″ in April, 9′ 8¾″ in May and 10′ 6″ in June. From about the middle of June to early in July, the freshet discharge comes down the main as also the feeder rivers and the mean river level in the latter month is raised suddenly to 12′ 2¾″. In August the height is augmented to 13′ 10½″ and it reaches the peak of 14′ 1¼″ in the middle of September. The mean level then begins to fall and comes down to 12′ 3¼″ in October, 10′ 3¼″ in November, 9′ 1⅛″ in December and 8′ 6″ in January. The mean level is therefore above the average for about 4¾ months in the year from just after the middle of June to the first week in November. The mean range of the tide is normally least in December and January at about 8′ 7″ and greatest in March and April as also in August and September at about 9′ 6″.

Discharge observations taken with batches of floats submerged to ⅗ths of the depths to give the mean velocities in the vertical sections[1]

[1] Observations taken by Mr. B. M. Samuelson on the Irrawaddy and Mr. E. C. Niven on the Rangoon river have verified the assumption that, for all practical purposes, the mean velocity on the vertical is at 0.6 of the depth.

were taken at Calcutta during the freshets and dry season of 1916 and 1917.[1]

From these observations it appears that fresh water discharge at Howrah city increases from practically nothing (200 cusecs) in June, to 65,000 cusecs early in the freshets and then to nearly 200,000 cusecs at the height of a moderate freshet. It diminishes to 25,500 cusecs at the end of December and to 8,000 cusecs in February. The maximum rates of flood inflow varied between *nil* in September and 390,637 cusecs in bore tides in February. The greater rates are due to the slopes[2] being steeper and the shorter interval of the flood current runs. At the height of the dry season the fresh water discharge of about 1,500 cusecs bears the following proportions to the tidal water in the ebb discharge at Garden Reach: 1 to 60, average in low neaps, and 1 to 150 in high springs. At the height of the freshets in neaps it is 1 to 0, and the proportion of min. to max. fresh water discharge is about 1 to 150. The tidal proportion increases rapidly down the river.

The extent of actual tidal influence, so far as the penetration of sea-water is concerned, can be demonstrated by the chlorine test. From experiments made by Dr. Macnamara, Chemical Examiner to the Government, referred to by David Waldie in a paper prepared for the Asiatic Society in 1866, the general conclusions were "the influence of the tide is little felt at Chinsura at any period of the year, not much more at Palta except towards the close of the hot season in May and June, when it is decidedly perceptible, though not great,

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[1] A summary of the findings is given below:

On the 19th July 1916, the total discharge of the ebb-tide at Kidderpur was calculated to be 206,272,000 cubic yards. The total inflow on the flood-tide was 99,483,000 cubic yards giving a total outfall for the half day of 106,789,000 cubic yards. The maximum rate of discharge at any time on the ebb-tide was 246,617 cusecs and the mean ebb discharge was 209,059 cusecs. The mean rate of outfall was 65,115 cusecs. On the 6th September 1916, at dead of neap-tides, at the height of the freshet season when the current was running down-stream all day, the total ebb discharge at the lower end of Garden Reach was 323,622,773 cubic yards. The maximum rate of discharge was 265,665 cusecs and the mean rate was 197,867 cusecs: there was no flood inflow. In 1917 under the same conditions, on the 10th September, the total discharge was 251,933,000 cubic yards with maximum and mean rates of 193,571 and 138,934 cusecs, respectively. At the end of the freshet season on the 29th December 1917, near the height of spring tides, the ebb discharge was 132,234.560 cubic yards and the flood inflow was 90,322,960 cubic yards, giving an outfall of 41,911,600 cubic yards with a mean rate of 25,765 cusecs. The maximum rate on the ebb was 170,320 cusecs, and on the flood 194,140 cusecs. In the middle of the dry season on the 24th February 1917 at the height of bore spring tides, the total ebb discharge was 174,155,000 cubic yards: the flood inflow was 160,275,000 cubic yards, giving a total outfall for the 12½ hours of 13,880,000 cubic yards, at an average rate of discharge of 8,395 cusecs The maximum rate of discharge on the ebb was 226,850 cusecs and the mean rate 170,470 cusecs. The maximum rate of flood inflow was 390,637 cusecs and the mean rate 253,066 cusecs.

[2] A slope formula cannot be used generally to determine rates of discharge, particularly on the flood-tide, owing to the rapidly varying slopes, but at the time of maximum discharge on the ebb when the slope is fairly settled, approximate results can be obtained. Using the Mississippi formula to check the float observations on the 6th September and 24th February, maximum discharge of 262,560 and 224,343 cusecs were calculated and these figures agree fairly well with 265,665 and 226,053 cusecs, respectively, obtained by the floats.

and not only decided, but to a large amount at Cossipur, Calcutta, during the months of March, April, May and June."[1]

Problems associated with silt

The proportion of silt carried in suspension in the water of the Bhagirathi varies continually with the height and strength of the freshets and the state of the tides, so that a very comprehensive series of tests would be required to give a reliable estimate of the mean proportion. So far, all estimates have been based on ridiculously few tests and the results are, therefore, no more than rough guesses. The first readings for this purpose were taken by Piddington, who in 1842 drew a sample of surface water at Calcutta at noon on the first day of each month and in 1864 took another series, including a set of samples drawn from 18 feet below the surface. From the experiments of Piddington and of Livesay (the latter carried out at different depths in the Bhagirathi on three days in August and November 1893), the records of weekly observations made at the Palta water-works in 1894 by James Kimber, the daily tests of surface water carried out by John Scott at Kidderpore in 1912 and various other observations taken at Hooghly Point since 1915 we obtain, after reducing the results to a common basis (viz. after reducing all the estimates on the ratio of 50 lbs. of silt to 45 lbs. of water which a cubic foot of damp silt contains, and expressing them as grains to a cubic foot), the following results:

	Bhagirathi, Livesay	Falta, Kimber		Calcutta, Piddington	
	Freshets	Freshets	Whole year	Freshets	Whole year
Grains in a cubic foot at surface	333	305	198	228	198
Grains in a cubic foot	518	416	270	311	290½
	Mean depth to 30 feet	Mean to 18 feet		Mean to 18 feet	

	Calcutta, Scott		Calcutta (Average)		Hooghly Point Reaks	
	Freshets	Whole year	Freshets	Whole year	Freshets	Whole year
Grains in a cubic foot at surface	397	437				
Grains in a cubic foot	541	599	477	321	470	400
	Mean to 18 feet				Mean depth to 16 feet	

[1] The results show the admixture of sea-water at Calcutta during the dry season, particularly during spring-tides, for while the proportion of sodium chloride, or common salt, rose from 12 grains at low-water to 19 grains at high-water on the neap-tide of the 24th May 1965, it increased from 14½ grains at low-water to 125 grains at high-water on the spring-tide of the 14th June, and while the total quantity of solid matter increased in the proportion of 5 to 1 from low-water to high-water, the proportion of salt increased by 8 to 1.

The Hooghly Point observation showed that the samples contained a considerably greater proportion of silt during spring-tides than in the neaps, even during the freshets. This is due to the stirring up of the deposit on the sands by the stronger action of the current and this accounts for the anomalous results obtained by Piddington and Scott, showing a greater proportion of sediment in the dry season than in the freshets. At Hooghly Point the silt brought down by the Damodar and the Rupnarayan had also to be taken into account. Tidal action introduces a further complication. As the discharge passes down the river mixing with the less turbid water brought in by flood-tide from the Bay, the general proportion of silt carried in suspension is considerably reduced. It appears that the mean proportion of dry silt during the freshet season (1st June to 30th November) is about 480 grains in a cubic foot. This rough estimate gives some idea of the quantities of solid matter annually carried down by the Bhagirathi. The silt obtained from the samples taken at Hooghly Point down to 16 feet depth consisted of very fine grained mud with hardly any admixture of sand. The mean proportion of dry silt in the Hooghly at Calcutta during the freshets would be 1 68 cubic inches of dry earthy matter in a cubic foot of water, or a proportion by volume of 1 to 1,030.

The sediment carried by the Damodar and Rupnarayan rivers in suspension probably contains a larger proportion of sand and would be heavier than the Hooghly silt.[1] In addition to the earthy matter, there are solids, such as lime and magnesia. Piddington found a mean proportion of 4.6 of carbonate of lime to 6.0 of earthy matter. The quantity of silt carried down by the Bhagirathi is, approximately, 54½ million cubic yards from the Nadia rivers and 17 millions from the Damodar, Rupnarayan and Haldi rivers. Of this about 54 millions is carried past Moyapur; 57¾ past the James and Mary and 66 millions past Hooghly Point. The total quantity (approximately 71½ million cubic yards) could form a block of dry earth one mile square and about 69 feet thick.[2]

Suspended matter is at present brought into the Bhagirathi in very large quantities, but, as has been shown, it is largely mud of very light character and easily transported, so that it only settles in sheltered pockets and for the most part is carried right out to sea and spread out over the Bay. The Bhagirathi has a fairly permanent

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[1] The flood discharge of the Damodar is very red and apparently carries a proportion of extremely fine, impalpable sediment so that it is difficult, even by filtering, to get rid of the discoloration of the water.

[2] Some reduction should be made for the silt trapped for brick making and other purposes. This, though apparently inappreciable, makes a fairly considerable quantity in the aggregate. It settles in the pits to a depth of 2 to 3 feet every season and a total quantity of one million cubic yards may be abstracted from the Hooghly water in this manner. Each settling ground from Chinsura downwards abstracts a small proportion of the suspended matter and helps to clear the water gradually down to Moyapur.

general regimen, that is, an equilibrium has been established between its sectional area and its power to dispose of the silt carried into it. The quantity of silt is so enormous that even if a small percentage of it were left over regularly in the channel each year, this, together with the sediment carried up by the flood-tide during the dry season, would, within a short time, show unmistakable signs of deterioration of the river. With a diminished supply from the feeder rivers, the tidal reservoir would be gradually reduced. The channel is dependent for its maintenance during eight months in a year on tidal action and any restriction on the up and down sweep of the current would unquestionably be harmful. Furthermore, the extra depth given by the rise of tide at high-water is of the utmost value to navigation.[1] A good freshet, is also valuable to navigation, as it scours and provides increased depth at both high and low-water. Very high freshets, however, are undesirable owing to the increased charge of heavy sediment which might cause difficulties in the estuary.[2]

Early docks

The riverside above Howrah has harboured maritime trade since the 14th century.[3] Before 1586, Betor was well known as an anchorage-ground for large sea-going vessels, particularly of the Portuguese.[4] The deeper channel of the river was then on the Betor side and the Sibpur sandbank, now a part of the mainland, had not formed yet.[5] Such was the background before the East India Company consolidated their position in this part of the country in the latter half of the 18th century. The flat mud-banks on the Howrah side were found suitable by early European traders to build mud-docks to careen and repair their vessels after long sea voyages. The older anchorage at Betor perhaps prompted the choice. As early as in 1706 projects were afoot to set up docks here for the "repairing and fitting of ships' bottoms"[6] which seem to be the earliest of their kind in India. In 1796 a dock existed at Salkia known as the dockyard of one Mr. Bacon.[7] In 1800 MacKenzie's Docks, in 1810 the 'Patent Slip' which was renamed in 1849 as the Calendonian Dock

[1] Any reduction of the tidal reservoir would react on the range of tide in the upper reaches, so that it is desirable to extend tidal action as far up the river as possible, both on account of the resulting benefits of increased scour in the channels and increased rise of tide in the dry season.

[2] The disadvantages of high freshets in their liability to block the approaches to the river, are emphasized by the conditions at the outlet of the Meghna, where the combined discharges of the Ganges, Brahmaputra and Meghna rivers fail to scour a continuous deep trough through the deposits.

[3] W. W. Hunter—Imperial Gazetteer of India, Provincial Series, Vol. I. Calcutta, 1901. p. 317.

[4] A. Mitra—District Handbook: Howrah; Census 1951. p. IX.

[5] J. R. Martin—Notes on the Medical Topography of Calcutta, 1837; The Calcutta Review, Vol. 4, July-December 1845, Calcutta, 1848. p. 478.

[6] A. Hamilton—A New Account of the East Indies. London, 1774. p. 12.

[7] The Calcutta Review—op. cit. p. 482. G. Toynbee—A Sketch of the Administration of the Hooghly District etc. Calcutta, 1888. p. 95.

W. H. Carey—The good old days of Honourable John Company, Vol. III. Simla, 1882. p. 184.

and in 1815 the Commercial Dock came into existence at Golabari. In 1823 the construction of the Strand Road in Calcutta caused the breaking up of the docks on this side of the river and the ship-builders went over to Howrah and by degrees set up docks there.[1] (A detailed description of the growth of docks in this area has been given in Chapter V on Industries.)

Navigability of the Bhagirathi

The location of these old dockyards seems to suggest the proximity of the deep channel of the river to the western bank which allowed the bigger ships to reach the Howrah side easily. The shifting of the deep channel is a recurring feature of the Bhagirathi and Job Charnock's selection of Calcutta's site was due to the contiguity of the deep channel to the eastern bank at that time. Fears have, therefore, been periodically entertained regarding the deterioration in the navigability of the river because of its frequent shifts. These apprehensions became so acute at various times that special enquiries had to be made in 1844, 1853, 1863, 1895 and 1918. The general consensus of opinion among pilots at all times has been that while the channels of the Bhagirathi fluctuate continually between bad and worse. there was no fear that the river would ever become unnavigable by vessels of heavy burden and moderate draft. "In 1896", writes L. S. S. O'Malley, "an engineering expert was brought out to consider the feasibility of improving the river and he suggested that training walls should be built to regulate the channels across the James and Mary Sands and the Mayapur Bar; but his recommendations were not considered practicable. A great deal has, however, been done of late years by the Port Commissioners to reduce the dangers of navigation.

"All the available evidence tends to show that the Hooghly is not deteriorating as a waterway, but rather that it is improving. The rules for the Pilot establishment laid down in 1826 show that the draft of water at which pilots were authorized to take charge of ships in the river was from March to September 16½ feet from Calcutta to Diamond Harbour and 18 feet from Diamond Harbour to Saugor; while from October to February the depths were 17 feet and 18½ feet respectively. Four years later a revised rule was issued, by which vessels drawing 20 feet were allowed to navigate the river 'with the aid of competent steamers at all times of the year up and down.' Pilots were 'strictly forbidden on pain of dismissal from the service from moving a vessel in the river on any account at a greater draft' and vessels of greater draft were to be moored at Saugor or Diamond Harbour, as the case might be, until lightened to the proper draft. Since that time the draft of vessels moving up and down the Hooghly has greatly increased. The draft of the ten most deeply-laden vessels up to March 1906 was 27 feet 6 inches, but

[1] C. N. Banerjei—An Account of Howrah, Past and Present. Calcutta, 1872. p. 73.

vessels of over 28 feet draft have navigated the river; and in June 1909 alone three steamers drawing 27 feet to 27 feet 11 inches left the Port of Calcutta."[1] In 1912-13, prior to the first world war, 49 vessels of over 27 feet and 12 vessels of over 28 feet draft used the river. In 1853 when the Hooghly Commission was considering the abandonment of the Bhagirathi, the largest vessel visiting the port was 1,810 tons. The maximum tonnage thereafter increased rapidly to 2,163 tons in 1860, 3,128 tons in 1870, 4,023 tons in 1880, 6,037 tons in 1890, 7,237 tons in 1900, 7,705 tons in 1905, 8,117 tons in 1911, 9,600 tons in 1914 and 12,989 tons in 1917. The lengths of vessels increased correspondingly from 368 feet in 1870, to 400 feet in 1880, 442 feet in 1890, 470 feet in 1900, 501 feet in 1911 and 511 feet in 1917. From the general characteristics of the Bhagirathi as described in the foregoing pages, it will be seen that the deteriorative phases may be expected only in certain sections of the river due to abnormal causes in the upper reaches (such as a succession of low freshets or high freshets) or in the estuary.[2] These phases, which have caused alarm in the past, have been found to be the results of temporary fluctuations and can in no way be taken to indicate a general or permanent deterioration of the particular sections, much less of the entire river. The appreciable increase in draft cannot of course be attributed wholly to an improvement of the river channel. In earlier times, a large proportion of the trade of the port was carried on by means of sailing vessels and prior to 1830 practically all the traffic consisted of sailing ships, there being only a few tugs. A ship with sails having a broader girth requires a deep channel of wider cross-section than is needed for a narrower steamer which can navigate along the deepest line or the thread of the channel. The supersession of flat sailing vessels by slim steamers thus enabled the latter to negotiate the river in spite of the greater drafts required for their movement. Another factor which has contributed considerably to the growth of traffic, is the provision of greater facilities for navigation in the river. In recent years, owing to complete surveys of the estuary undertaken annually and ordinary surveys made more frequently, a closer watch is maintained on the vagaries of the river making it possible to discover newer routes into which traffic is diverted immediately an old channel shows signs of deterioration. The frequency of recent surveys has also made it possible to take better advantage of the existing channels by providing for buoys, marks and early information of changes etc. All this coupled with constant dredging operations has enabled the Bhagirathi to meet the growing demands of trade by accommodating larger and deeper vessels progressively.

[1] O'Malley and Chakravarti—op. cit. pp. 5-6.

[2] The navigable channel in the lower portion of the estuary below Mud Point develops at intervals on the eastern side, and then moves bodily westward until it works itself outside the influence of the flood-tide from Saugor Roads and then closes, while a new eastern channel is opening.

It may, therefore, be said that although there has not been any definite betterment of the channels, the overall improvement has forestalled any serious deterioration of the river.[1]

The natural limitations of the river with its bends, bars and tidal bores will, for the best part, remain unchanged. The inadequate working capacity of the Calcutta port is best reflected in the number of days for which ships must wait to obtain berths. It has, therefore, been decided to establish a satellite port at Haldia, some 65 miles downstream from Howrah city. This will eliminate many of the disadvantages arising out of uncertain draft forecasts, sudden cuts in drafts, long waiting time for getting berths or favourable tides, costly and time-consuming pilotage etc.[2]

The Saraswati

The Saraswati branches off from the Bhagirathi at Tribeni a few miles above Hooghly and enters the Howrah district at Baluhati (Baluti) as a very insignificant shallow stream. It then meanders south in a tortuous course, and, keeping the Rajpur *jhil* to the west, flows past Domjur and Andul, falling into the Bhagirathi just above Sankrail. It was, in O'Malley's time (1909), navigable up to Andul by boats 5 tons' burden or less. Its high banks and the remains of large boats occasionally dug up from its bed show that once it must have been a much larger river. This inference is confirmed by numerous large pools, commonly called *dahas*, found in its bed from which many riverside villages take their names, e.g. Makardah, Jhapardah, Bhandardah etc. The dereliction of the Saraswati seems to have been mainly due to the diversion of the Damodar water from the upper reaches of the Bhagirathi. By Rennell's time (1779-81) it had so far silted up that it was quite a small stream; it is now a very shallow and narrow creek, except for a few miles above its outfall. It is shown as a large river in old maps as late as that of Valentijn (based on information gathered in 1660-70) and was formerly used by country boats and small sloops for inland traffic.[3] According to Sherwill, even in 1857 a former branch of the Saraswati could be traced from Chandltala past Amta into the Damodar and the Rupnarayan and so through the lower reaches of the Bhagirathi to the sea. Rennell also has referred to this old course. Most probably Saraswati had two branches, one debouching into the Bhagirathi at Sankrail and the other into the Damodar. Radhakamal Mukherjee, however, thinks otherwise. "When Rennell drew his map (1764), the Saraswati was 'a small creek', being only 7 ft. 6 inches deep at high water near its exit from the Bhagirathi. His assumption that Saraswati once passed through the site of Bellya morass to Ompth (Amta) on the Damodar and then crossed to the Rupnarain to march to the sea is unaccept-

[1] C. J. Stevenson-Moore and others—op. cit. pp. 99-117.

[2] Government of West Bengal—Regional Planning for West Bengal etc. pp. 49-50.

[3] O'Malley and Chakravarti—op. cit. pp. 7-12.

able. The old course of the Saraswati, through which the Ganges waters flowed after the Bhairab course lost its importance, probably in the 12th century, seems to be that by Syanneger (Shahnagar), Chaumaha, Bejjeh, Sundari, Amgachi and the Bellya morass, whence it took on an easterly course to return to the Bhagirathi at Betadda or Betor This is the course of the Saraswati as charted by De Barros and Van den Broucke. After Betor the Saraswati occupied what is now the old bed of the Bhagirathi to flow seaward from Pichalda."[1] It appears from recent surveys that one of the main lines of entry into Bengal in the past was up the Rasulpur river, thence by a channel connecting it with the present Haldi river, and across by a branch of the Rupnarayan, which flowed direct into the river. From the Rupnarayan there was another channel going direct into the Bhagirathi some distance above Calcutta. This latter channel was most probably one of the two branches of the Saraswati.

Satgaon, situated on the Saraswati, was the ancient royal port of Bengal. But when the Portuguese came to India in 1518 and 1530, they landed at Chittagong, showing apparently that the main approach to the Bengal delta was from the eastern side. This was partly confirmed by De Barros, who stated in 1540 "Satgaw (Satgaon) is a great and noble city though less frequented than Chittagong on account of the port not being so convenient for the entrance and departure of ships." Even in 1565, according to Caesar Frederick, large ships did not go beyond Betor (Sibpur) "because that upwards the river is very shallow and little water, the small ships go to Satgaw and there lade." From this it would appear that even then the lower portion of the Saraswati had decayed and the approach to Satgaon was along the Bhagirathi to Tribeni and then down the Saraswati for about 4 miles. In its lower reaches the Saraswati has, at present, even lost its name and is known as the Sankrail *khāl*.[2]

The drainage of the Damodar-Bhagirathi doab, is carried into the Bhagirathi by various fairly large creeks such as the Sankrail *khāl*, Daokoh and Chak Kasi *khāls* above and below Bauria, "Uluberia creek at Uluberia, Hog river creek entering opposite Brul Point and Pukuria creek opposite Fishermen's Point. In addition, the regular drainage of the Howrah district including that from the Rajapur *bil* to the west of Howrah is carried through sluiced outfalls at Baidyabati, Bally, Garden Reach, Pir Serang and Sisbaria. None of these individually carry an appreciable supply into the Hooghly and no figures are available but calculating from the rainfall and run off, the total supply from these sources and smaller *khals* from the west into the Hooghly from Nadia down to the Damodar outfall, may be roughly estimated at about 2,500 million cubic yards, or an

[1] Radhakamal Mukherjee—The Changing Face of Bengal. Calcutta, 1938. pp. 161-4.
[2] C. J. Stevenson-Moore & others—op. cit. p. 32.

average discharge of about 4,270 cusecs during the six months from 1st June to 30th November. With a general run off of about 1 inch, the maximum rate from all these sources combined would be about 30,000 cusecs."[1]

The Damodar

The Damodar, which leaves the Hazaribagh district at an elevation of over 582 feet above sea-level and has a length of over 250 miles between this point and its confluence with the Bhagirathi, enters the Howrah district near the village of Dihi Bhursut and then flows south to Amta where it receives the Madaria *khāl* on the left bank. It receives the Gaighata creek on its right bank some 6 miles below Amta at Bainan. O'Malley and Chakravarti gave the following account of the river: "Leaving Amta, it follows a winding southerly course to Bagnan and then flows to the south-east falling into the Hooghly opposite Faltā Point. Its total length within or touching the district is 45 miles. The Damodar is influenced by the tide as far as Raspur two miles north of Amta. At Amta the spring-tide rises 2 to 2½ feet in summer; ten miles lower down at Mahishrekha the rise is 5 feet at neap and 8 feet at spring-tides. During the summer, i.e., from March to May, bores are felt as far up as Amta, especially when strong southerly breezes are blowing. The height of the bore-wave varies according to weather and tides, but does not usually exceed 4 feet. The river has in summer 6 to 8 feet of water at Mahishrekha and is not usually fordable below the junction of the Gaighata *Khal*. Above this point the river narrows rapidly, and at Amta shrinks in the hot weather to a width of only 10 to 12 feet and a depth of a foot or so. Cargo boats do not ply as far up as Amta after October, except during spring-tides.

"No important change in the course of the Damodar has taken place for many years past, but, on account of a large breach at Begua in the Burdwan district, the volume of water passing down it has been much diminished, a large quantity being diverted from its present channel. ... The banks are well-defined and vary from 6 to 15 feet in height. The river has been embanked on both sides, but the embankments on the upper part of the western side have not been maintained. It has been found that inundations on that side cause less damage, while the existence of embankments on both sides, by walling in the river and raising its bed, tends to cause heavy loss when breaches occur."[2]

The Damodar has a sandy bed averaging half a mile in width and is fordable at many places in the hot and cold seasons. In the rains it is fordable nowhere and becomes navigable by country boats. Since the formation of the Begua breach, a large volume of its water flows along the Mundeswari resulting in a considerable shrinkage of the main course.

[1] Ibid. p. 92.
[2] O'Malley and Chakravarti—op. cit. p. 8.

"Of the several branches of the Damodar, two only call for special mention, viz., the Kana Damodar or Kausiki and a branch on the west also called the Damodar. The Kana Damodar enters this district on the east of Ichhanagar village, and flows south, winding its way to the west of the Rajapur *jhīl*. Finally, turning south-east, it falls into the Hooghly a mile north of Uluberia town, after a course of nearly 20 miles in the district. A small stream now, it must have been more important in old days, as several large villages inhabited by the *bhadralok*, or respectable Hindu castes, lie along its course. The western branch issues from the main channel of the Damodar in the extreme north of the district, and after a winding course of some 14 miles rejoins the Damodar 3 miles north-west of Amta."[1]

Changing courses of the Damodar

The deltaic action of the Damodar is not dependent on the tides but starts much higher up at places where it can no longer carry the excess charge of sand that it brings down from the hills and so drops it in the bed. This reduces the depth and the width of the river valley forcing the stream to break its banks and debouch on to the plains through numerous distributaries or spill channels.

Jao De Barros, followed by Blaev (1650), showed the Damodar as debouching by two mouths above Pistola, which has been identified with the village of Pichhaldaha, close to Fort Mornington Point.[2] One of these mouths is the present outfall of the Damodar opposite Falta Point, and the other is the Sijberia *khāl* above Uluberia through which the Kana Damodar falls into the Bhagirathi. In the latter half of the 17th century Van den Broucke's map (1660) showed the main Damodar flowing south into the Rupnarayan somewhere in the position of the present Baksi *khāl* while a smaller branch entered the Bhagirathi along the present Damodar channel and a larger branch flowed past Burdwan apparently along the line of the Gangur Nadi and fell into the Bhagirathi at Kalna. A chart of about 1690 shows the Kana Damodar (mentioned as Jan Perdo or John Perdo) as quite a large stream entering the Bhagirathi near Uluberia where the formation of a large island indicated that the tributary must have been of some magnitude. In this map the lower course is named *Raspas* (*Rasphyus*) or the *Mandala Ghāṭ* river--the former being a Dutch and the latter an Indian name. Later, in a map of about 1760 the John Perdo river is shown as having deteriorated into a creek called the Goree Ganga, probably intended for Buri Ganga or Old Ganges, with no island at its mouth. In Rennell's map it is shown as a small stream without any connexion with the Damodar and without islands at its mouth; and in O'Malley's time it was a shallow silted up stream carrying off local drainage only. Rennell referred to the Kana and Kunti Nadis as the old Damodar and indicated that the river

[1] O'Malley and Chakravarti—op. cit. pp. 8-9.
[2] ibid. p. 10.

deserted this channel in 1757. In a map of Du Gloss, one of Rennell's assistants, dated 1766, the lower Damodar is shown very much as at present though narrower at the mouth and called by its old name, the Mandala Ghat river. It is split at Amta into three small creeks so that the high flood discharge of the Damodar must have spilled and could not have been carried into the Bhagirathi by one channel. It seems probable that the Damodar has at no time discharged all its water into the Bhagirathi above its present outfall, but before the middle of the 18th century, a fair part of its flow must have entered above the Moyapur bar when the upper branches, such as the Banka Nadi, the Kunti Nadi and the Kana Damodar were operating alternatively. Since the last diversion of the Damodar about 160 years ago, the upper section of the Bhagirathi has been deprived of this additional supply.[1] It is clear from the preceding account that up to the 16th century the main flow of the Damodar was confined to the Kana Damodar. In the 17th century it flowed along the Banka-Behula-Gangur channel. In the first half of the 18th century the Amta course of the lower Damodar came into prominence but this was also silted up and finally the drainage line shifted to the Kaki and the Mundeswari channels.

The Rupnarayan

The Rupnarayan is formed just east of Ghatal by the confluence of the Silabati and Dwarakeswar rivers, both rising east of Purulia. It enters the district at its confluence with the Mundeswari river in Uttar Bhatora village. It then flows south and south-east receiving the Hoorhoora and the Baksi *khāls* at Baksi. From Baksi southwards the average width of the Rupnarayan is greater than that of the Bhagirathi in the corresponding latitude. The Baksi *khāl* connects the Rupnarayan with the Damodar through the Gaighata *khāl*, Sab Kastala *khāl* and Ghespati *khāl* and with the Moja Damodar Nadi through the Kamarkhali *khāl*. From the confluence of the Baksi *khāl* down to its mouth, the Rupnarayan is embanked along the left bank. About 15 miles above Tamluk, the Rupnarayan is crossed by the South Eastern Railway at Kolaghat. From there downwards only the eastern half (excluding the *chars*) and from Kolaghat northwards the entire river falls within the jurisdiction of the Howrah district. After passing Kolaghat, the Rupnarayan expands into a very wide basin and then enters the Bhagirathi through a narrow but deep neck at Geonkhali opposite Hooghly Point and at the lower end of the James and Mary Reach. The river does not intersect the district anywhere but flows along its western and southern boundaries for some 35 miles. In O'Malley's time (1909) it used to be influenced by the tides throughout this portion of its course. But today the tidal limit is at the mouth of the Baksi *khāl*. It is navigable by boats and steamers all through the year. Several islands are found in the river channel,

[1] C. J. Stevenson-Moore and others—op. cit. pp. 92-3.

while accretions in the shape of grass covered *chars* are not infrequent, especially on the right side.[1]

Changing courses of the Rupnarayan

"The changes in the lower portion of the Rupnarayan are also considerable. This river was known to Europeans up to the 18th century by a number of different names. It was called Ganga in the maps of Gastaldi and De Barros, Gaenga in Blaev's map, Tamalee in Bowrey's chart, Tomberlie in the pilot chart of 1703, Patraghatta by Valentijn (1670), and finally the Rupnarayan by Rennell, who referred to it as 'falsely called the Old Ganges'. Similarly, in the older accounts, such as the *Da Asia* of De Barros, it went under the name Ganga, and in the later accounts of the 17th century it was designated Tumbolee (Hedges), Tumberleen (Master) and Tombolee (Bowrey). From Valentijn's map it appears that a large branch of the Damodar fell south into the Rupnarayan above Mandalghat and Tamluk, while another branch running east fell into the Hooghly near Kalna. The main channel of the Damodar is still connected with the Rupnarayan by the Kana Dwarakeswar and it is not unlikely that a large stream joined the Rupnarayan somewhere near Ghatal. By these two branches boats could have come from the Bhagirathi to the Rupnarayan without difficulty, and this probably led to the idea of its being a branch of the Ganges. The next prominent fact is that the Rupnarayan is shown in older maps (Gastaldi, De Barros and Blaev) as discharging itself by two channels enclosing a large island at its mouth. The westerly channel disappears in Valentijn's map, Bowrey's chart and the pilot map of 1703 A.D.; and it appears, therefore, that it must have silted up and that the island became more or less joined to the mainland in Midnapore. The combined result of its discharging all its silt-laden water through the eastern channel alone and the close proximity of the main stream of the Damodar was the formation of the James and Mary Sands in the Hooghly."[2]

The Gaighata-Baksi *khāl* debouching into the Rupnarayan, is but an improved natural waterway, 7½ miles in length, forming a connecting link between the Damodar and the Rupnarayan. It was taken over by the Public Works Department from the District Board of Howrah in 1894 and in O'Malley's time (1909) tolls were levied on it.[3] At present there is no trace of the Damodar channel (mapped by Valentijn) which used to fall into the Rupnarayan at Mandalghat opposite Tamluk. This channel must have been important in those times as the Damodar river was often called River Moundleghat, e g. in the Pilot chart of 1703.[4]

The basin of the Rupnarayan is subject to abrupt changes. The low islands and *chars*, which are more or less completely covered at

[1] O'Malley and Chakravarti—op. cit. p. 9.
[2] ibid. p. 11.
[3] ibid. p. 9.
[4] ibid. p. 171.

high tide, are continually changing their form. In the early years of this century erosion was so active on the right bank just above the neck of the river that it threatened to cut into the Orissa Canal (Uluberia Canal or Midnapur Coast Canal) some miles away from the Geonkhali lock. The erosion, however, stopped suddenly and in a couple of years or so, the whole bight which had been scooped out was refilled and became a *char* land. Owing to the restricted channels of the Kangsabati and the Dwarakeswar, the lower portion of the Hooghly district, the eastern portion of the Midnapur district and the western portion of the Howrah district were, prior to the implementation of the flood control measures of the Damodar Valley Corporation, subject to severe inundations during heavy floods. The flood effect used to be accentuated by the backing up of the discharges of these rivers when there was a heavy flood spill from the Damodar into the head of the Rupnarayan. Even now the lower channels of the Rupnarayan (which are tidal) are incapable of passing the whole discharge and the combined spill is held up in the country above Baksi *khāl* forming a reservoir or basin. The spill is carried at a regulated rate through the narrow neck of the river below the Baksi *khāl* and it is estimated that at the Kolaghat bridge the maximum discharge of the Rupnarayan is 2,35,000 cusecs which is approximately equal to its maximum rate of discharge into the Bhagirathi at Geonkhali. In addition to this fresh water supply the Rupnarayan provides a magnificent basin or reservoir for the reception of the tidal waters and the influence of this river on the Bhagirathi is evident from the wide and deep channel scoured from their confluence right down to Kalpi, a distance of nearly 15 miles, by the combined discharge of the two rivers. Tidal spill in the upper reaches of the Rupnarayan is completely restricted by the construction of embankments.[1]

Drainage conditions of the lower Damodar Valley

A drainage survey of the lower Damodar Valley, including the Rupnarayan and the Damodar basins, was undertaken between 1853 and 1857 by Capt. J. P. Beadle, David Limond, C. McGuinness and others to ascertain the drainage problems of the region and the conditions which prevailed in the trans-Damodar area.

The embankments

Limond surveyed the Kana and the Kunti, both derelict streams. It was noticed that the numerous embankments were causing an artificial interference in the natural development of the delta. Their upkeep, again, was neglected since the middle of the 18th century as the *pulbandi* charges realized by the Government from the landlords for repairing the embankments were sometimes assessed so high that the zemindars fell into arrears. Various experiments followed resulting in Government's eventually taking over the maintenance of the embankments. Under Government supervision a marked improvement was noticed by 1845. In 1846 a committee

[1] C. J. Stevenson-Moore and others—op. cit. p. 95.

suggested that all existing bundhs should be removed. But this drastic action was never carried out and between 1847 and 1854 the Damodar breached its embankments at numerous places nearly every year. The question of maintaining the bundhs in a more rational manner thus received further attention of the Government and the river was prevented from spilling over its left bank by means of a stronger embankment. In 1855 the right bank embankment was partially removed, retaining only such portions as were situated at angles and curves of the river. Thereafter, the Damodar, unrestrained by embankments on the west, led to a one-sided building up of the land and raised various other complicated problems, one of which, the notorious Burdwan fever, necessitated the draining of swamps.[1] It will appear from O'Malley's pertinent observation, with which S. C. Bose and other experts of the Damodar Valley Corporation agree, that these embankments did more harm than good. "A large part of the district being very little above mean sea-level is liable to be flooded every year by the principal rivers and their branches. Protective embankments have, therefore, long been held to be necessary and during the early years of British administration the main channels of the three chief rivers were embanked, viz. the right bank of the Hooghly, the left and right banks of the Damodar and the left bank of the Rupnarayan. The effect of these embankments was that the rivers, depositing silt in their beds, gradually raised them above the level of the adjoining country.

"Along the right bank of the Hooghly there are zemindari embankments from Sankrail to Alipore on the mouth of the Damodar, except a portion measuring about 1¼ miles in length from Chak Kasi *Khal* to Sijberia, which is being maintained by Government as a portion of the Rajapur drainage works. They were badly breached by high floods in 1904-05, causing serious loss of crops in the interior. The zemindars concerned having failed to repair them properly, the Government has taken charge of two sections (one at Chak Kasi, 3 miles above Uluberia, and the other from Uluberia to Champa *Khal* on the south) and has put them in proper order, the cost being realized from the zemindars under the Embankment Act.

"Government now maintains the following embankments: (1) the Hooghly right embankment from the Botanical Garden to Mahisdhara *Khal* and the Chakkasi embankment from Chakkasi *Khal* to Sijberia; (2) the Damodar left embankment through the whole length of the district and the right embankment from the Begua breach to the Maja Damodar and from the mouth of the Gaighata *Khal* to the outfall into the Hooghly; (3) the Rupnarayan left embankment from the mouth of the Bakshi *Khal* to the outfall in the Hooghly; (4) the embankment on the south of the Bakshi and

[1] S. C. Bose—The Damodar Valley Project. Calcutta, 1948. pp. 49-50.

Gaighata *Khals*, joining the Rupnarayan left with the Damodar right embankment; (5) a *takavi* embankment along the left bank of the Madaria *Khal* from Dilakhas to Amta, about half of which has been raised, while the other half is being remodelled in order to protect the Rajapur basin."[1]

The embankments mentioned by O'Malley are still maintained by the Government. They are the agencies through which people of the region have sought to control nature by stabilizing the courses of the main rivers. They had another more mundane reason to do so. The Kana Nadis (derelict branch streams) shared the spill of the main river when the latter was in spate. But the banks and beds of most of these side channels had come under the plough (except during high floods) and it was but natural for the usurpers to ask for a shutting off of spill water from the main stream into the derelict distributaries. They, therefore, agitated for embankments along the main stream and at first the zemindars and then the Government were prevailed upon to set up the embankments. To protect the railways and the Grand Trunk Road (a number of bridges on which were washed away in 1848), embankments were also considered very necessary in the middle of the 19th century. It was, however, realized very soon that the embankments forced deposition on the river bed and thereby not only pushed the flood level higher and higher but the greater hydraulic pressure also caused frequent breaches. In order to counteract the effects of the gradually rising river beds, the levees had also to be raised correspondingly. A stage was soon reached when the engineers felt that the limit of safety had already been surpassed (where the bed of the river became higher than the elevation of the neighbouring plains) and the banks would burst any moment. The Government, therefore, decided in 1855 to remove such portions of the right bank embankment of the Damodar as would ease the pressure of water on the left bank. On account of the opening of the right bank of the Damodar, the spilled area has gained in elevation varying from 5 to 10 feet.[2] The southernmost limit of the spill water is the Gaighata-Baksi *khāl* which starts just below the Anderson weir at Rhondia. The Damodar *khāl* (present Moja Damodar), in Beadle's time, was an inundating stream. But today the Moja Damodar, as its name indicates, has completely silted up with a few small patches of waterlogged areas in its bed choked with water-hyacinth. Thus, it may be observed that the trans-Damodar tract is a moribund area. In 1956 a drainage study revealed that it was necessary to have the trans-Damodar tract flushed every year by spill, both for better sanitation and increased fertility of the area. Today the D.V.C. schemes are intended to bring this about by irrigating and scouring the dead and dying drainage

Sluices

[1] O'Malley and Chakravarti—op. cit. pp. 81-2.
[2] Satyakam Sen—Drainage Study of the Lower Damodar Valley. Calcutta. p. 30.

channels of the Damodar in this region. All sluices on the Damodar left bank up to Raspur (3 miles above Amta) are used for irrigation purposes. They operate only when the discharge at Rhondia is about 200,000 cusecs. The floor level of some of them is too high and these fail to operate unless the flood is high enough. The details of the sluices operating in this region and the purposes they are intended to serve are mentioned in the following table.

SLUICES ON DAMODAR LEFT BANK (1 TO 9), MADARIA KHAL (10 TO 13) AND GAIGHATA KHAL (14 TO 16)[1]

Sl. No.	Location	Floor level	Height of the floor level of the sluice channel from the present river-bed level	Purpose served	Area served (in acres)
1.	Balichak	18.2′	4′6″	Irrigation	3,840
2.	Bajeprotap	19.06′	3′0″	"	1,280
3.	Rashpur	17.48′	6′0″	"	1,280
4.	Someswar (old)	9.48′	3′0″	Drainage & Irrigation	2,560
5.	Someswar (new)	11.77′	nil	"	2,240
6.	Deora	6.60′	nil	"	1,920
7.	Gazipur	7.47′	2′6″	Drainage	960
8.	Udong	5.60′	6′0″	"	1,280
9.	Hurope	8.62′	4′0″	"	2,240
10.	Kanpur	Not available	nil	Irrigation	Not available
11.	Penro	"	4′0″	Drainage	"
12.	Harishpur	"	nil	Irrigation	2,560
13.	Kotalpara	"	4′0″	Drainage	Not available
14.	Koria	"	Not available	Drainage & Irrigation	4,480
15.	Gopalpur	"	"	"	2,240
16.	Bainan	"	"	"	5,760

Canals and other drainage channels

Howrah is one of the first districts in West Bengal where long-distance canals were excavated for navigation. The Midnapur Canal, which passes through this district, was opened to traffic even before the construction of the Eden Canal. O'Malley and Chakravarti gave a very comprehensive account of the canals and drainage channels in the district which is worth quoting in length. "The only locked canal in this district forms part of the Midnapore Canal and comprises two tidal reaches extending from Uluberia to Bansberia (or the present Prasadpur), where it crosses the Damodar river, and from

[1] Satyakam Sen—op. cit. pp. 49-50.

Kultapara (Kulitapara-Ed.) to Kantapukur (Katapukuria-Ed), where it joins the Rupnarayan. ... The total length of the canal, including 16¾ miles of canalized distributaries, is 69¼ miles. The tidal reaches were constructed chiefly for the purpose of navigation and were opened for traffic in 1873. Each range has two parallel distributaries, and their water, when available, is used for irrigation, but the supply is variable and cannot be depended on. Before the opening of the Bengal-Nagpur Railway (the present South Eastern Railway), the canal formed part of the main route from Calcutta to Midnapore, but the traffic, once considerable, has fallen off owing to railway competition.

"There is also an improved natural channel, called the Gaighata and Bakshi *Khals*, 7½ miles long, which forms a connecting link between the Damodar and Rupnarayan rivers. It was taken up and improved by Government in 1856-57, and was in charge of the Public Works Department until 1872-73, when it was transferred to the District Board. In 1894 the maintenance and management of the channel were resumed by Government. ...

"The drainage of the large swamps in the district is a far more important question than that of canal irrigation or navigation. Such swamps are found in the depressions between the rivers and their principal branches, one set (the Howrah swamps) lying between the raised banks of the Hooghly and the Saraswati, another (the Rajapur swamps) between the Saraswati and the Kana Damodar, and a third (the Amta swamps) between the Kana Damodar and the Damodar. The first schemes for the drainage of these swamps appear to have been put forward as a result of the epidemic of a virulent type of fever called Burdwan fever, which raged in Hooghly and part of Howrah. ... Mr. Adley, C. E., who had been appointed by Government to determine whether want of drainage had caused or intensified the prevailing fever, reported in 1869 that defective drainage caused by the silting up of rivers and *khals* was a main cause of the fever and recommended the reclamation of the Dankuni, Katlia and Rajapur swamps. Government approved a portion of his scheme, viz., that for draining the Dankuni marsh, which lies just outside the district with its outfall in the Bally *Khal*, and the work was taken in hand.

"Subsequently, in 1873, Colonel Haig, Chief Engineer of Bengal, who had been deputed to make an engineering survey of the locality, recommended that the Dankuni scheme should be extended to the tidal tracts in this district. He suggested three schemes for the reclamation of the three sets of swamps mentioned above, viz., (1) the Amta scheme for the drainage of 84 square miles lying in the western drainage basin; (2) the Rajapur scheme for the drainage of the tidal portion of the central basin comprising the Rajapur, Panchla and Barajol (apparently a corruption of *bara jhil*) swamps;

and (3) the Howrah scheme for the drainage of the tract lying between the Bally *Khal* on the north, the river Hooghly on the east and south, and the Saraswati on the west. The Howrah scheme was taken up first, being begun in November 1884 and completed in October 1885 at a cost of 5½ lakhs. The larger Rajapur scheme was next begun and completed in 1894-95 at a cost of 14¼ lakhs. The Amta scheme is still under consideration. ...

"The tract of country drained by the Howrah drainage scheme is bounded by the river Hooghly on the south, by the towns of Bally and Howrah on the east, by the river Saraswati on the west, and by the Bally *Khal* and the road from Bally to Chanditala on the north. Its area is about 49½ square miles, of which nearly 18 square miles consist of pure swamp. The lowest part is 7½ feet above mean sea-level, and even when tidal water is excluded, the rainfall is enough to fill it to a depth of 4½ feet. The most prominent characteristic of these swamps is that instead of forming a single large basin, like the Dankuni swamp to the north, they are divided into four catchment basins, each separated from the other by a low ridge.

"The works consist of (1) a main channel 8½ miles long, the width of the base varying from 10 feet at the end to 80 feet near the sluice on the river; (2) branch and subsidiary channels with a total length of 10 miles; (3) an outfall sluice near the Botanical Garden, having seven vents of 5 feet each, with self-acting shutters on the river side and drop-gates worked by screws on the land side; (4) another outlet sluice, having one vent (5 feet by 5 feet) with a drop-gate worked by screws, near the Banderbil sluice on the Bally *Khal;* and (5) an embankment extending for about 2½ miles along the river Hooghly from the Botanical Garden to the mouth of the Mahisdhara *Khal*, the object of which is to exclude tidal water from the swamps.

"The Rajapur scheme drains an area of 269.85 square miles and is divided into two sections, viz., Barajol and Rajapur. The Barajol section drains an area of 30.5 square miles, of which more than half is swamp. The works consist of (1) a main channel (9,600 feet long); (2) two branch channels, with a combined length of about 9 miles, which run from the villages of Jangalpur and Satgharia to the river Hooghly; and (3) an outfall sluice, with four vents, 8 feet by 5 feet each.

"The Rajapur section is a large engineering work, affecting the drainage of 239.35 square miles comprised in five basins, viz., the upland basin (140 square miles), Janai basin (32.70 square miles), Panchla Jol basin (22.50 square miles), Rajapur Jol basin (31.90 square miles), and an area of 12.25 square miles draining directly into the Hooghly. The works consist of (1) a main channel, 16 miles long, extending from half a mile north of Rajapur to Sijberia a mile above Uluberia; (2) three branch channels, with a combined length of about 7 miles, three *khals* with a combined length of 9½ miles

serving as branch channels, and four detached channels with a total length of about one mile; (3) a big outfall sluice on the Hooghly river at Sijberia, having 20 vents, each 8 feet by 5 feet; (4) a protective embankment, about 1¼ miles long, from Sijberia to Chakkasi *Khal*, with three irrigation sluices. There are also two bungalows, one at Sijberia and the other at Rajapur, three road-bridges and four foot-bridges.

"The main channel, starting from the outfall sluice at Sijberia, follows the course of the Kalsapa *Khal* or Kana Damodar (which has been remodelled) for 3¼ miles as far as Basdeopur. From that place it passes through the low lands of Danchla and Dhanki to Siddheswar, and thence through the Rajapur Jol, finally ending about half a mile beyond the Howrah-Amta road. The first branch channel leaves the main channel in the 12th mile, and going north-west passes under the Howrah-Amta road, about one mile from Bargachhia, connecting with the low lands of Santoshpur. The second branch leaves the main channel in the 14th mile, and going north-east passes under the Howrah-Amta road, and connects at Jhapardah with the Matia *Khal*, of which a length of 5 miles has been improved to serve as a branch channel. . . .

"It has been estimated that the Rajapur scheme has reclaimed from its three principal swamps, Rajapur, Panchla and Barajol, 4,122 acres of waste land and has improved no less than 37,972 acres of low land. The western portion of Rajapur is, however, being affected by floods pouring in from the Amta, Madaria and upland basins, largely through breaches in the Kana Damodar and Madaria *Khal* left embankments. Crops were damaged by such floods in 1893-94, 1899-1900, 1904-05 and 1905-06. The left embankment of the Madaria *Khal* from Amta to Harishpur is consequently to be raised, and the portion from Penro to Dilakhas is being remodelled.

"These schemes are interesting examples of large reclamation works, beyond the means of the cultivators or of individual landlords, which are practicable only for a combination of landed proprietors or capitalists working under the protection of the Drainage Act. Both have amply fulfilled expectations. The Magistrate of Howrah in the Annual Administration Report of 1897-98 remarked:—'All the drainage schemes have proved to be of immense benefit in reclaiming the waste swamps and improving the other lands. They were originally intended for the drainage of the swamps, but they are now advantageously utilized in irrigating the lands, in years of drought and scanty rainfall, with fresh water from the Hooghly river.' More recently, in 1905, the Commissioner remarked:— '. . .The surplus water is drained out by the channels and sluices in years of heavy rainfall; while in years of drought water from the river is let in for cultivation and drinking purposes. The schemes have been of great benefit to the people of the neighbouring tracts,

who can reap a good harvest in years of drought as well as in years of heavy rainfall.'

"The completion of the entire project for the drainage of the district by carrying out the Amta scheme proposed over 30 years ago appears desirable on many grounds. It would not only add hundreds of acres to the cultivated area and improve thousands of acres of low lands—an important consideration in a district which does not raise enough food for its consumption. It would also drain a water-logged locality in which malarial fever threatens to be endemic, owing to the stagnant water being the breeding ground of the malaria-bearing anopheles mosquito. In its present state, moreover, the waters flooding the Amta basin not only damage the Amta crops three or four years out of every five, but also threaten to swamp the western part of the Rajapur basin."[1]

Performance of the Damodar Valley Corporation

The idea of setting up an organization like the Damodar Valley Corporation was first mooted in 1925 when Dr. C. A. Bentley advocated the re-introduction of flood waters into the Bhagirathi-Damodar doab as well as in the trans-Damodar tract in his book 'Malaria and Agriculture in Bengal'. Subsequently, in 1930 Sir William Willcocks put forth a similar plea in a series of lectures delivered at the University of Calcutta which were later published as a book under the title 'Ancient System of Irrigation in Bengal'. In 1931 Mr. C. Adams Williams stated that "the principle involved in increasing the fertility of the soil and decreasing the ravages of malaria by the use of silt-laden water is one which has been accepted by the irrigation department of the province." In 1939 the Damodar Valley Flushing and Irrigation Scheme was prepared with the object of flushing the moribund rivers and insanitary pockets in this region. But the indifferent performance of this project called for more comprehensive planning[2] and the 10-man Committee set up for the purpose in 1943 recommended the initiation of measures on the lines of the Tennessee Valley Authority of the U.S.A. The services of W. L. Voorduin, a senior engineer on the staff of the T.V.A., was secured. His suggestions were scrutinized by Indian and American experts and finally with the approval of the Governments of India, Bengal and Bihar, the D.V.C. Act was passed on February 18, 1948 bringing into existence the Damodar Valley Corporation on July 7, 1948.[3]

The total area commanded by the D.V.C. canal network in the district comprises 56,385 acres falling within the Amta, Jagatballavpur and Domjur police stations. It has not yet been possible to supply irrigation water throughout this entire area but the excavation of

[1] O'Malley and Chakravarti—op. cit. pp. 76-81.
[2] W. L. Voorduin—The Unified Development of the Damodar River; A Preliminary Memorandum. August 1945.
[3] S. K. Basu and S. B. Mukherjee—Evaluation of Damodar Canals (1959-60). Calcutta, 1963. p. 5.

canals and ancillary works have made sufficient progress. Since 1963-64 both *kharif* and *rabi* crops are receiving irrigation water from the D.V.C. canals and during 1965-66 a total of 3,897 acres in the district was irrigated during the *kharif* and 1,777 acres during *rabi* season.

The D.V.C. has resuscitated some river channels like the Saraswati and the Moja Damodar and re-modelled some of the branch canals and distributaries. Its canals have been designed on the basis of the latest non-silting and non-scouring velocity principles and their slopes have been designed in accordance with Lacey's 'Regime Channel Slope' due consideration being given to the ground slope to minimize the number of earthworks The irrigable area has been divided into suitable blocks which are directly fed by small village channels, excavated and maintained by the collective enterprise of the villagers themselves and the D.V.C. authorities.[1]

Floods

It is well known that floods in lower West Bengal are usually associated with heavy precipitation in the Chotanagpur plateau, which serves as the catchment area of the Damodar group of rivers. Sometimes the rainfall is so slight in this upper region that the rivers depending on it degenerate into mere trickles even during the rainy season. Such uneven flow is due to the following reasons: (1) Soil erosion over the last few centuries has denuded the catchment area of its soil cover leading to severe depletion of its underground water-storage capacity and (2) Extensive deforestation has further aggravated this condition. As a result, the catchment area cannot absorb rain water or retard run-off and the proportionately larger run-off in the upper reaches is the primary reason of floods in the Damodar Valley.

In the preceding pages we have dealt with the secondary causes of floods, viz. overflows, breaching of banks and embankments etc. Since surface run-off, movement of underground water and drainage capacity of the different areas of the district differ due to local variations of slope and soil texture, floods flush out certain tracts but form swamps in others. Brief descriptions of important floods visiting the district since the middle of the 17th century have been given in Chapter IV on Agriculture and need not be repeated here. Tanks are so numerous in the district that no intensive survey about their number has so far been undertaken. There are no springs or spring-heads in the district either. About underground water resources, a detailed treatment will be found in the next section on Geology.

GEOLOGY

Geological antiquity

Geologically, the Howrah district is located in the stable shelf on the south-western flank of the Bengal Basin. The rocks of this area lie buried under a thick basalt trap and tertiary sedimentary forma-

[1] United Nations—A case study of the Damodar Valley Corporation and its Projects. Flood Control Series. No. 16. Bangkok, 1960. p. 30.

tions. The overlying sedimentary sections had experienced minor tectonic disturbances, a fact which is borne out by a few gravity faults of uncertain age. Morphologically, the sedimentary structures represent a coalescing of a large number of alluvial fans and it remains doubtful if there is any sharp stratigraphical break in these structures. The environment of sedimentation was initially marine and estuarine and then deltaic and fluviatile. The principal deposits vary in age from the Cretaceous period to the Pleistocene epoch. Specimens of flora and fauna preserved as fossils are too insufficient to date the recent past or even to permit an exact synthesis of the geological history of the district. Findings of the recent Indo-Stanvac Petroleum Project reveal that the Bengal Basin is underlain by a geosynclinal trough and that there have been many marine transgressions and regressions as evidenced by a thick sequence of shelf facies (the thickness of tertiary sediments alone range between 3,529 m. at Jalangi to 4,041 m. at Port Canning) having an east-south-easterly dip and resting on a basement which lies a few thousand metres below the surface.

Systems of geological formations

The basalt strata is most probably of the Jurassic age.[1] The dip, nature, extent and stratigraphy of the Jurassic rocks are somewhat deceptive owing to deposition on shelving banks. In the east the depth of the deposits is more than that in the west. All bands of Cretaceous depositions overlying the Jurassic system have a general north-east to south-west strike with a narrow band of continental deposits on the north-west becoming progressively marine towards the south-east. These deposits consist of shale, claystone, siltstone and sand and their approximate thickness is nearly 1,000 metres.

The Paleocene and lower Eocene epochs witnessed shallow marine deposition of sand overlain with limestone. There are indications that an embayment called the 'Damodar Embayment' moved further south than in the Upper Cretaceous period and remained there till the Middle Eocene times. Marine transgression started since the Middle Eocene and in the Upper Eocene it was on so large a scale that the Damodar Embayment leaves no trace. During the Upper Eocene period a gulf covering the greater part of Burma and extending up to eastern Bengal, became split longitudinally into two separate gulfs, at first by an archipelago of islands but eventually by a long ridge of land, now known as the Arakan Yoma ridge. The Bay of Bengal, to the west of this ridge, then reached as far as the southern margin of the Shillong Plateau, engulfing the whole of the present district.[2]

Oligocene regression, because of the continued rise of the Arakan Yoma, brought about a shallow marine environment of which shale,

[1] Instances are not rare in other parts of India of widespread igneous action on a large scale during the Cretaceous and Jurassic periods.

[2] Edwin H. Pascoe—A Manual of the Geology of India and Burma, Vol. III. 1962. p. 1614.

claystone and siltstone are the chief facies. The upper boundary of the Oligocene beds is marked by a zone of unconformity. During Miocene times when the eastern portions of the Bengal Basin were still rising and the Himalayas continued to soar upwards obliterating the Eocene gulf,[1] marine transgression in this part of the Bengal Basin moved the shoreline furthest west enclosing the eastern end of the Raniganj area[2] and obliterating all traces of the Damodar Embayment The effect of this wholesale tilt was that in its upper limit the Miocene series was again marked by a zone of unconformity. The prevailing rocks are mixtures of sand and clay or are alternating laminae of the same, shale, claystones and siltstones predominating over sand. It is evident from the lithological character of sediments that the sea regressed in Pliocene and older Pleistocene times. The rivers which replaced the gulf have not been interrupted since late Pleistocene times. At the top of the Pliocene-Pleistocene system, having the thickest bedding of all formation, there is a north-south tending sag (very apparent in the Burdwan Ghatal environ) which, very interestingly, coincides with southerly course of the Damodar river. The base of the sub-recent formation has an overall low dip to the east.

The environment of sedimentation had been deltaic in most parts of the district during the last geological period and is fluviatile at present. It is, therefore, a pertinent question whether this tract should be included in the Ganges (Bhagirathi) delta. Geologically, the Damodar Embayment and the Chotanagpur rivers like the Damodar, Rupnarayan etc. are much older than the Bhagirathi because all of them originate from an area which is stable and very old, whereas the Himalayas from where the Ganges takes its rise, belong to a much recent geological period, namely the late Pliocene.[3] The existence of older deposits of the Damodar, mainly brown coloured sands occurring below the present surface deposits, further substantiates the view that it is a combined delta of the Ganges (Bhagirathi) and the Chotanagpur rivers.

Pleistocene and Recent sediments do not differ in grain size but an excess of very fine grained material is found in the Pleistocene deposit.[4] Recent sediments have higher water content and their compation or petrifaction is loose. These sediments have variable but appreciable quantities of organic material. Occurrences of gravel and calcareous concretions are more common in the sediments which are believed to represent the Pleistocene series. Pleistocene sediments are predomin-

[1] Edwin H. Pascoe—ibid. pp. 1734-5.
[2] ibid. p. 1685.
[3] M. S. Krishnan—'The Structural and tectonic history of India', in Memoir of the Geological Survey of India, Vol. 81. p. 56.
[4] J. P Morgan and W. G. McIntyre—'Quaternary Geology of the Bengal Basin, East Pakistan and India', in the Bulletin of the Geological Society of America, vol. 70, March 1959. pp. 319-41.

antly sand and silt including gravel and *kānkar*. The sand varies in texture from coarse to fine and is often found mixed with gravel. Considerable quantities of silicified wood fragments also occur. The Pleistocene sediments rest on the Tertiary sediments and gradually pass upwards through three cyclothemic succession of gravel, sand, silt and clay to the Recent sediments. In the lower deltaic region no surface outcrops of the Pleistocenes have been recorded. However, a very interesting information about the sub-surface geology was derived from a boring at Fort William, only a couple of miles away from the district headquarters. The findings were as follows:[1] "Beneath about 10 feet of surface soil are 15 feet of stiff blue clay, overlying a light coloured sandy clay which from above downwards becomes gradually darker from an admixture of vegetable matter, till it passes into a bed of peat at a distance of about 30 feet from the surface. Thence beds of clay and variegated sand intermixed with *kankar*, mica and small pebbles, alternate to a depth of 120 feet, when the sand becomes loose and almost semi-fluid in consistency; at 152 feet this quicksand becomes darker in colour and coarser in grain, intermixed with water-worn nodules of hydrated red oxide of iron resembling laterite to some extent. At 159 feet is a stiff clay with yellow veins, becoming at 163 feet dark and friable, with much vegetable and ferruginous matter. A fine sand follows at 170 feet gradually becoming coarser and mixed with fragments of quartz and felspar to a depth of 180 feet. At 196 feet clay impregnated with iron is passed through, and between 221 and 340 feet there is a recurrence of sand containing fragments of limestone, nodules of *kankar* and pieces of quartz and felspar. At 350 feet a fossil bone, probably of a ruminant, was extracted; at 360 feet and lower down several pieces of tortoise-shell were obtained. At 392 feet a few pieces of fine coal and some fragments of decayed wood were picked out of the sand, and at 400 feet a piece of limestone was brought up. Between 400 and 481 feet the beds consist of fine sand, like that of a sea-shore, largely intermixed with shingle. No trace of marine deposits was detected, and from top to bottom the beds traversed have every appearance of being silts laid down by fresh-water or in the neighbourhood of an estuary. At a depth of 30 feet below the surface, or about 10 feet below mean tide level, and again at 382 feet, beds of peat and decayed wood were found, and in both cases the deposits prove the existence of ancient land surfaces. Some of the wood in the upper peat beds is that of the *sundri* tree (*Heritiera littoralis*), which grows in abundance on the muddy flats of the Ganges delta; the rest of it is probably the root of a climbing plant resembling *Briedelia*. Finally, while bones of terrestrial mammals and fluviatile reptiles were found at considerable depths, the only shell fragments noticed—at 380 feet—

[1] E. H. Pascoe—op. cit. pp. 1986-8.

are said to have been of fresh-water species. Another noteworthy circumstance is the occurrence between the depth of 175 and 185 feet, again between 300 and 325 feet, and yet again throughout the lowest 85 feet (395-481 feet) of pebbles in considerable quantities. The pebbles in the lowest portion are especially mentioned as large and their size is shown by the fact that they impeded the progress of the bore, which was six inches in diameter, and that it was necessary in several cases to break them up before they could be extracted; it may be inferred, therefore, that they were at least two or three inches across. The greater part of the pebbles were derived from gneissic rocks, but some fragments of coal and lignite, judging from their composition, came probably from the Tertiary or Cretaceous coal seams of the Garo Hills.

"The peat bed encountered in the borehole is found in all excavations around Calcutta at a depth varying from about 20 to 30 feet and extends over a large area in the neighbourhood country. This peaty layer has been noticed at Port Canning on the Matla river 35 miles to the south-east, at Khulna in Jessore, 80 miles east by north, and at Chandernagore 20 miles to the north, always at such a depth below the present surface as to be some feet beneath the present mean tide level. In many of the cases noticed, roots of the *sundri* tree were found in the peaty stratum. This tree grows a little above ordinary high-water mark in ground liable to flooding, so that in every instance of its roots occurring below the mean tide level, there is conclusive evidence of depression. This evidence is confirmed and the depression it indicates magnified, by the occurrence of pebbles, for it is extremely improbable that coarse gravel would have been deposited in water 80 fathoms deep. Furthermore, large pebbles and boulders could not have been brought to their present position unless the streams which now traverse the country had a greater fall formerly, or unless—which is perhaps more probable—rocky hills existed which have since been covered up by alluvial deposits. The coarse gravels and sands which form so considerable a proportion of the beds traversed can scarcely be deltaic accumulations, and it is therefore, probable that, when they were formed, the present site of Calcutta lay near the margin of the alluvial plain, and it is even possible that a portion of the Bay of Bengal was dry land; Calcutta now lies a little over 18 feet above sea-level. At the same time, as R.D. Oldham notes, whilst a depression of nearly 500 feet, probably since Tertiary times, is unmistakably indicated in the neighbourhood of Calcutta, signs of elevation within the same epoch in Orissa, only 100 to 200 miles distant to the south-west, are equally distinct."

Surface deposits

The surface deposits consist of the Damodar riverine soil in the extreme north-west (Uday Narayanpur thana), saline soils in the southern half (entire Syampur and parts of Bagnan, Uluberia and Panchla thanas), Ganga lowland soils in the eastern portions (entire Baly,

Malipanchghara, Golabari, Howrah, Sibpur, Bantra, Jagachha, Domjur and parts of Sankrail and Jagatballavpur thanas), and Damodar flatland soils in the rest of the district.[1] A detailed treatment of soils—their classification, distribution, nature and composition—has been made in Chapter IV on Agriculture.

Groundwater

Sub-surface correlation of the alluvial material made on the basis of the lithological study of boreholes indicates that major groups of aquifer consisting of coarse to medium grained sand, occasionally mixed with gravel, occur generally within the depth-span of 46 to 137 metres below the land surface in the Howrah area. The capacity of an aquifer to yield water depends upon its transmissibility and storage coefficients. Transmissibility is again dependent on effective porosity determined by the sorting of the aquifer material and degree of recharge of the groundwater body. These are of fundamental importance in wellfield development, as without the knowledge of these aquifer constants, determination of 'safe yield' and economic spacing of wells is not possible. Study of relevant geological sections reveals that there is variation in the mechanical composition and sorting of the aquifer materials, thereby adversely affecting their permeability.

Towards Howrah a varied picture of groundwater salinity is noticed in the aquifer zones occurring at different depths. These aquifers are separated by intervening clay beds and appear to be of confined nature. The aquifers possibly are characterized by wide lateral variation in granularity and as such in permeability and consequently rendering groundwater movement non-uniform. This would result in varying chemical characteristics within equivalent depths at short distances, as is actually the case.

Further south towards Sibpur, the sporadic distribution of salinity in the shallow aquifers are noticeable, whereas deeper aquifers show some degree of similarity, although fluctuations are not uncommon. But it can be tentatively concluded that the quality of water in the aquifers below 137 metres in the Howrah-Sibpur areas appears to be better than what can be obtained from shallow aquifers about that depth.[2]

Mineral wealth

Though hardly possessed of any mineral wealth, the alluvial plains of the district are nonetheless very useful to agriculture. The clays also provide an unlimited supply of raw material for the manufacture of bricks and earthen utensils. Sands of Paleocene and Lower Eocene periods contain petroleum and gas. These are overlain with limestone.[3]

[1] Information based on a tentative soil association map prepared by the Soil Survey Unit, Agricultural Chemistry Section, Directorate of Agriculture, West Bengal.

[2] This sub-section is based on information supplied by the Director General, Geological Survey of India.

[3] G. Ramaswamy and S. Sengupta—Final Report on Seismic Surveys (Indo-Stanvac Petroleum Project), West Bengal, August 1960.

In the Miocene beds down to depths below 8,000 feet, there is hydrocarbon gas (but no petroleum) and these reserves are associated with interbedded sands,[1] the composition of which does not appear to be constant, i.e. their distribution indicates a hiatus between them.[2] The basal Pliocene beds associated with the Miocene-Pliocene unconformity have yielded 'some genuine shows of hydrocarbons.' But the Indo-Stanvac Petroleum Project submitted a very pessimistic report concluding that no commercially exploitable gas or liquid was found in West Bengal. Very recently the structural traps with the best reserve potentials are being tested once again by Indian and Russian oil technologists. As has already been indicated, the district possesses another mineral fuel—peat, representing the first stage in the transformation of vegetable matter into coal. There has not been any serious thinking so far about the commercial utilization of this commodity. The fine textured sand of Recent geological period occurring below the top clay bed (7.5 to 55 metres thick) is yellow in colour and occurs up to a depth of about 76 metres. The sediments occurring at greater depths are generally dark coloured. The sand grains are generally rounded to sub-rounded and are highly micaceous, both muscovite and biotite being present.[3]

Earthquakes

According to a report received from the Director General, Geological Survey of India, "Earthquake shocks and tremors were felt in Howrah district on 4th April 1905 (Kangra earthquake), September 1906 (Calcutta earthquake), 8th July 1918 (Srimangal earthquake), 3rd July 1930 (Dhubri earthquake), 15th January 1934 (Bihar-Nepal earthquake), 15th August 1950 (Assam earthquake) and 15th April and 9th June 1964 (Calcutta earthquake). But in none of the cases was the epicentre of the earthquake in the district.

"In April 4 1905, when the epicentre of the earthquake was at Kangra in Punjab, the Howrah district was enclosed by isoseists (line of equal violence of shocks) II and III, where acceleration of earthquake waves was from 10 to 25 mm per sec. per sec. The shock was hardly felt."

During the earthquake of September 1906, when the epicentre was in the southern part of the Gangetic delta, or the earthquake of July 1918, when the epicentre was at Srimangal in Assam, or the one of July 1930 with its epicentre at Dhubri in Assam, the shocks were smart enough to be noticed but no damage was done.

"In the earthquake of January 1934, when the epicentre was near the Bihar-Nepal border, the district was enclosed by isoseist VI,

[1] It is interesting to note that in the Yenangyaung province of Burma similar oil sands occur in the Oligocene-Miocene sequence (*Vide*, Pascoe—op. cit. p. 1692).

[2] Very interestingly, the distribution of the Durgapur beds of the Lower Miocene stage also 'indicates a hiatus between them.' (*Vide* Pascoe—op. cit. p. 1685).

[3] Source: Director General, Geological Survey of India.

where the acceleration of earthquake waves was 250 mm per sec. At Amta, hanging objects swung, doors and windows rattled and a few houses were slightly damaged. The district felt the tremors of isoseismal VI in the Assam earthquake of August 1950 whose intensity caused the ringing of bells, oscillation of chandeliers, stopping of clocks etc. The acceleration was 250 mm per sec. per sec. Several parts of the Howrah district, experienced a mild earthquake shock at 10.05 P.M. (I.S.T.), immediately followed by a severe second shock of about 40 seconds duration on the 15th April, 1964. Some people, it is reported, felt a very mild third shock. The epicentre was apparently in the Bay of Bengal, somewhere between Sagar Island and the Contai coast. A readjustment within a fault along the course of the Bhagirathi river or a minor slip within the alluvium itself has been indicated as the cause for this earthquake. The district was enclosed by isoseist VI and the acceleration of the earthquake wave was 250 mm per sec. per sec. The shock was felt by all and it damaged a few buildings. At Uluberia and Bagnan many mud houses developed cracks, some of them gaping 5 to 8 cm. wide. Sleeping persons awoke. The shocks were preceded by a rumbling sound."

BOTANY

Botanical divisions & vegetation

Outside the Botanic Garden at Sibpur, of which a description will be found in Chapter XIII, there is not much in the district which may be of special interest to a botanist. Most of the land is under rice cultivation and very little remains under natural vegetation. No forest is now left in the district and the flora found in it may be classified into three types: land, mangrove and aquatic

Land vegetation

The first consists of trees, shrubs and ground vegetation of which the latter is made up of perishable spreading plants forming a ground cover. Trees are met with mostly in and around villages; on railway embankments and on the banks of some streams shrubs are plentiful. Elsewhere herbaceous plants form the bulk of the vegetation.

The commoner tree species are *Terminalia catappa* (deshi badam), *Pongamia pinnata* Pierre, *Diospyros peregrina* (abloosh or gaub), *Cocos nucifera* (narikel), *Tamarindus indica* (tentul), *Borassus flabellifer* (tal), *Phoenix sylvestris* (khejur), *Azadirachta indica* (neem), *Mangifera indica* (am), *Litchi sinensis* (lichoo), *Syzygium jambos* Alston, *Syzygium cumini* Skells, *Lagerstroemia speciosa* (jarool), *Moringa oleifera* (sajina), *Bombax ceiba* (shimool), *Aegle marmelos* (bael), *Trema orientalis* Bl., *Ficus benghalensis* (bat), *F. religiosa* (aswaththa) *Barringtonia acutangula* Gaertn., *Trewia polycarpa* Benth., *Dillenia indica* (chalta), *Artocarpus integer* (kanthal), *Artocarpus lakoocha* (dalo, dao or madar), *Alstonia scholaris* (chhatim), *Polyalthia longifolia* (debdaru), *Spondias mangifera* (amrha), *Erythrina indica* (palte-madar), etc. *Bambusa arundinacea* (bamboo or bans) groves are frequent.

The commoner species of shrubs are *Flacourtia indica* (bengchi or bonch), *Glycosmis arborea* (a kind of ash-shaorha), *Zizyphus oenoplia* (shia-kul), *Cassia sophera* (chakunda), *Opuntia dillenii* (phani-monsha), *Pavetta indica* (kukur-chura), Var. *tomentosa* (the variety is of densely pubescent matted wool type), *Pluchea indica* Less., *Solanum verbascifolium* Linn., *Adhatoda vasica* (tulsi or bakas), *Lantana camara* Var. *aculeata* Mold., *Duranta repens* (mehdi), *Clerodendrum viscosum* (ghentu or bhant), *Euphorbia antiquorum* (tashira-monsha), *Calotropis gigantea* (akanda), *Jatropha curcas* (bag-bharenda), *Kirganellia reticula* Baill. etc.

The mat vegetation forming a ground cover mostly comprises the following species: *Oxalis corniculata* (amrul-shag), *Polycarpon prostratum* Asch. & Schw., *Desmodium triflorum* (ban-chandal or gora-chand), *Trianthema portulacastrum* Linn., *Glinus lotoides* Linn., *Centella asiatica* Urban, *Dentella repens* Forst., *Grangea maderaspatana* Poir., *Gentipeda orbicularis* Lour., *Evolvulus nummularius* Linn., *Justicia simplex* D. Don, *Boerhavia diffusa* (punarnaba), *Polygonum plebeium* (panimarich), *Euphorbia thymifolia* (khirui), *E. bombayensis* Sant., *Commelina benghalensis* (dholapata or jata-kanshira), some sedges and many grasses. The commoner erect or diffuse species are *Cleome viscosa* (hurh-hurhe), *Cleome gynandra* Linn., *Polygala chinensis* (meradu or garadu), *Portulaca oleracea* (barhanunia-shag), *Corchorus aestuans* (pat or koshta), *Crotalaria striata* (shone), *Ammannia baccifera* (dadmari), *Turnera ulmifolia* Linn., *Vernonia cinerea* (kuk-shima or kukur-songa), *Blumea lacera* (barha-kuk-shima), *B. laciniata* DC., *Xanthium strumarium* Linn., *Canscora decussata* (chireta), *Sonchus brachystus* DC., *Heliotropium indicum* (hati-soonrh), *Solanum nigrum* Linn., *Nicotiana plumbaginifolia* Viv., *Lindernia crustacea* F. Muell., *Amarantus gracilis* Desf., *A. spinosus* (kanta-note), *Croton bonplandianum* Baill., *Chrozophora rottleri* Juss. ex Spr., *Acalypha indica* (swet-basanta), *Commelina salicifolia* Roxb., *Typhonium trilobatum* (ghet-kachu or ghekul), *Colocasia esculenta* (kachu), some sedges and a few grasses. The commoner suffruticose herbs are *Malvastrum coromandelianum* Gurcke, *Sida acuta* Burm., *Abutilon indicum* (jhumka), *Hibiscus vitifolius* (ban-kapas), *Cassia occidentalis* (kal-kasonda), *Solanum indicum* Linn., *Anisomeles indica* O. Kuntze, *Aerva lanata* Juss., *Jatropha gossypifolia* (lalbharenda or sayambara) etc.

A good part of the flora consists of climbers, most of which are herbaceous, some sub-woody, and very few woody. Common climbers are *Tiliacora acuminate* Miers, *Abrus precatorius* (kunch), *Derris scandens* Benth., *D. uliginosa* Benth., *Passiflora foetida* (jhumka-lata, an American plant naturalized in India), *P. suberosa* (a kind of jhumka showing axillary tendrils), *Jasminum sambac* (bael-phul or mallika), *Cocculus hirsutus* Diels, *Stephania hernandifolia* Walp., *Cardiospermum halicacabum* (shib-jhul), *Coccinia grandis* Voigt, *Mikania*

cordata Robins, *Tylophora indica* Merr., *Cayratia carnosa* Cogn., and species of *Ipomoea* (bhuin-kumrha, kalmi-shag, ranga-aloo), *Ampelocissus* and *Dioscorea* (yam or chupri-aloo).

Mangrove vegetation

On the south-eastern border of the district along the Bhagirathi some mangrove species are found, namely *Acanthus ilicifolius* Linn., *Excoecaria agallocha* Linn., *Hibiscus tiliaceus* Linn., *Premna integrifolia* Linn. It should, however, be pointed out that the well-known sundri (*Heritiera minor*) or true mangroves representing the *Rhizophoraceae* order no longer occur in this district. In association with the species mentioned above the following are usually met with: *Dalbergia spinosa* Roxb., *Derris uliginosa* Benth., *Caesalpinia crista* Linn. and *Sarcolobus carinatus* Wall.

Aquatic vegetation

Because of the extensive network of waterways and the numerous pools and ponds to be found in most villages, the district is very rich in aquatic and swamp vegetation. The latter consists mostly of *Sesbania paludosa* (a plant resembling bak), *Neptunia oleracea* (pani-lajuk), *Aeschynomene indica* (a plant resembling shola), *A. aspera* (shola), *Rotala indica* Koehne, *Hydrolea zeylanica* Vahl, *Limnophila indica* Bruce, *Asteracantha longifolia* Nees, *Monochoria hastata* Solms, *Typha angustata* (hogla), *Cyperus corymbosus* (a plant resembling mootha or madur-kati) and *Scirpusgrossus* (keshur). *Eichhornia crassipes*, which covers much of the stagnant water and is also present in the sluggish waterways, was originally a Brazilian plant and is locally called kachuripana or water hyacinth though it has nothing to do with the true hyacinth. Common aquatic species are *Jussiaea repens* (kesar-dam), *Ipomoea aquatica* Forsk., *Ceratophyllum demersum* Linn., *Hydrilla verticillata* (a kind of jhangi), *Nechamandra alternifolia* Thw., *Vallisneria spiralis* (pata-shaola), *Ottelia alismoides* Pers., *Pistia stratiotes* (barha pana or toka-pana), *Aponogeton natans* Engl. & Krause, *Potamogeton crispus* Linn., *Najas graminea* Del., *Pseudoraphis spinescens* Vick., *Leersia hexandra* SW., *Lemna* (duck-weed or khudi-pana) and *Spirodela* sp. etc.

Factors affecting vegetation

Of the climatic and biotic factors which mainly influence plant growth, the former affect the ground layer while the latter bear upon all vegetative life. During the rains, the major part of the district is flooded and most of the mesophytic herbaceous plants perish except those on high ground. Hydrophytes and swamp vegetation, however, thrive during this season. During summer, many of the herbaceous species dry up and the hydrophytes and swamp vegetation swindle to a great extent. The most important biotic factor is interference by man and animal, domestic or otherwise.[1]

FAUNA OR ZOOLOGY

Research on zoo-geography and palaeontological findings have been so poor in Howrah district that evolution of life in this area can

[1] Source: Director, Botanical Survey of India.

hardly be sketched. It is certain that the district became habitable to land animals only in the late Pleistocene times. The epicontinental sea (which existed even after the Miocene period when land bridges across the Tethys geosyncline were thrown up), must have been moderately rich in marine life (plankton, algae and other animals), otherwise the occurrence of oil or gas here would have been inconceivable.[1]

Mammals

At the beginning of the present century, wild animals were scarce in the district as there was hardly any extensive forest area to provide cover for them. In O'Malley's time (1909), leopards were seldom seen. "One was killed by a local *shikari* at Baltikri 3 or 4 years ago, and another was reported to have been seen in some *hogla* jungle in the grounds of the Civil Engineering College at Sibpur 2 years ago; but they were probably only stray visitors from the adjoining districts. Wild pig abound in parts of the Uluberia subdivision, and a few are said to be found in the Jagatballavpur thana. Crocodiles are sometimes to be seen on the banks of the Hooghly (Bhagirathi) and Damodar rivers during the winter months; and during the rains they frequently find their way into tanks and flooded lowlands near the river."[2] Of the wild animals that still occur in the district, the following may be mentioned.[3] The carnivores are represented by the jackal (*Sial*) and the fox (*Khek-sial*) which are often met with. The jungle cat (*Ban-biral*) and the leopard cat (*Chita-biral*) are occasionally found. They are useful as destroyers of rodents and smaller vermin, and more than repay such damages as they may do to poultry. Small clawed otter and common otter (*Bhondor*) are also seen in pools and streams living on fish. Common palm civet and small Indian civet (*Khatas*, *Gandhagokul*, *Bham*) are familiar animals. They prey upon poultry and rats and are also fruit-eaters. Small Indian mongoose and Indian grey mongoose (*Neul*) are common in rural areas. They destroy poultry and small livestock as well as rodents, vermins, scorpions and snake. Hare (*Khargos*), a swift and timid rodent, porcupines (*Sajaru*) and squirrels (*Kathbirali*) may be seen in cultivated tracts. Of rats and mice, the house mouse, house rat and bandicoot rat are rife. Many diseases such as bubonic plague, rat-bite fever etc. are caused by them. The house shrew (*Chhucha*) is also frequently met with. The familiar rhesus macaque (*Lal-bandar*) is found in many places and langur (*Hanuman*) in the Sibpur Botanical Gardens. The large fruit bat, commonly known as the 'flying fox' (*Badur*), are scarce. Indian false vampire (*Chamchika*) and lesser yellow bat are also found. These insectivores play an useful role in the agricultural economy

[1] *Vide*, preceding section on Geology.
[2] L. S. S. O'Malley and Monmohan Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 13.
[3] Source: Director, Zoological Survey of India.

as a natural enemy of pests. Gangetic dolphin (*Susuk*) is encountered in the Bhagirathi.

Avifauna

There are some 66 species of birds in this district, namely little grebe or dabchik (*Pandubi*), little cormorant (*Pankauri*), snake bird (*Gayar*), egrets (*Bak*), ibises (*Kharhakal*), storks (*Samuk-khol* or *Manik-jor*), bar-headed goose (*Rajhans*), brahminy duck (*Chakha-chakhi*), pintail (*Dig-hans*), cotton teal (*Bali-hans*), common teal (*Bigri-hans*), gargancy (*Giria*), red-crested pochard (*Lalsir*), white-eyed pochard (*Bhuti-hans*), comb duck (*Naki-hans*), white-breasted water hen (*Dahuk*), Indian moorhen (*Jalmurgi*), purple moorhen (*Kampakhi*), coot (*Karandale*), pheasant-tailed jacana (*Jal-mayur*), bronze-winged jacana (*Jalpipi*), painted snipe (*Raj-chaha*), terns (*Gangchil*), blue rock pigeon (*Paira*), koel (*Kokil*), crow pheasant (*Kuko*), cuckoos (*Papiya* or *Chatak*), roller (*Nilkantha*), hoopoe (*Hudhud*), swallows (*Abaleil*), cuckoo-shrike (*Kasya*), *bulbul*, tailor bird (*Tuntuni*), grey tit (*Ramganga*), chestnutbellied nuthatch (*Chorapakhi*), flowerpecker (*Fulchuki*), sunbirds (*Durga-tuntuni*), house sparrow (*Charui*), orioles (*Bene-bau*) and tree pie (*Harichacha*). Besides, there are two varieties of crows, namely *Pati-kak* and *Danr-kak* and various kinds of vultures (*Sakun*), eagles (*Sampar, Koral*), hawks (*Baz*), falcons (*Laggar*), kites (*Chil*), lapwings (*Tittibh*), stints and soundpipers (*Chaha*), snipes (*Kadakhõcha*), doves (*Ghughu*), parakeets (*Tiya, Chandana, Fultushi*), owls (*Lakshmi-pẽcha, Kuture-pẽcha*), Kingfishers (*Machhranga*), bee-eaters (*Banspati*), swifts (*Batasi, Talchoch*), woodpeckers (*Kath-thokra*), barbets (*Basanta-bauri*), larks (*Mathcharai, Bharat*), wagtails (*Khanjan*), shrikes (*Karkata*), thrushes (*Doyel, Kalchuri, Dama*), babblers (*Chhatare*), weaver birds (*Babui*), maynas (*Salik, Gang-salik, Ram-salik, Gooye-salik, Jangli mayna, Harbola*), drongos (*Finga*) and *munias*.*

Reptiles

Of lizards, *Hemidactylus brooki* (house gecko), *H. leschenaulti* (tree gecko), *H. flaviairidis* (wall lizard), *Gekko gecko* (tuk-kaa), *Calotes versicolor* (blood sucker), *Mabuya dissimilis, M. carinata* and *M. macularia* (Brahmini), *Riopa albopunctata, Varanus monitor* (monitor lizard) and *V. salvator* (water monitor) are the principal types.

Typhlops porrectus (Puiye), *T. braminus* (Brahmini blind snake), *T. diardi* (Diard's blind snake), *T. acutus* (beaked blind snake), *Python molurus* (rock python or Ajagar) which are very large, *Ptyas mucosus* (rat snake), *Coluber fasciolatus* (Banded Racer), *Oligodon cyclurus, O. arnensis, Ahaetulla tristes* (a common Indian bronze-back), *Lycodom jara* (Jara's wolf snake), *L. aulicus* (common wolf snake or *Heley*), *Sibynophis sagittarius, Natrix piscator* (Checkered Keel-back), *N. stolata* (Striped Keelback), *Dryophis nasutus, Enhydris enhydris* (common fresh water snake), *Cerberus rhynchops, Bungarus*

* Local names have been italicized to distinguish them from their English equivalents.

fasciatus (Banded Krait), *B. caerulus* (common Indian Krait), *Naja naja* (Indian cobra or *Gokhro*), *N. hannah* (king cobra or *Sankhachur*) and *Vipera russelli* (Russel's viper or *Chandrabora*) are the chief species of serpents found in the district.

Gavialis gangeticus (*Gharial*) and *Crocodilus palustris* (marsh crocodiles) are the only two species of the crocodile family still occurring in the district. With rapid industrialization and growth of population the larger reptiles may soon be completely exterminated. The creatures which have been most affected and are already rare are marsh crocodiles, *gharials*, monitor lizards, water monitors, *ajagars* and *gokhros*.

Testudines

Of testudines, *Geoclemys hamiltoni* (*Kalikutta* or *Kachhap*), *Hardella thurgi*, *Kachuga teetum*, *Balagur baska*, *Kachuga kachuga*, *Lissemys punctata*, *Trionyx gangeticus* (a fresh water turtle with neither bony nor horny scales) and *Trionyx hurum* are the principal types.

Amphibia

The district has an amazing variety of fish. In brackish water the following species of estuarine fishes are found: *Hilsha ilisha* (*Ilish*), *Setipinna phasa* (*Phasa*), *Godusia chapra* (*Chapila*), *Engraulis telerra* (*Khoira*), *Coilia dussumeria* (*Telchita*), *Pellona elongata* (*Pankha*), *P. Indica*, *Opisthopterus tardoore* (*Tharduri*) and *Reconda russiliana* are the principal varieties of clupids. Of mullets, *Mugil tade* (*Bhangon*), *M cephalus* (*Bhangon*) and *M. persia* (*Parse*); of polynimids, *Eleutheronema tetradactylum* (*Gurjali*), *Polydactylus paradisus* (*Topsia*) and *Polydactylus indicus* (*Sele*); of sciaenids, *Pama pama* (*Bhola*), *Sciaenodes microdous* (*Bhola*) and *S. biauritus* (*Bhola Bhetki*); of perches, *Lates calcarifer* (*Bhetki*), *Pamadaysis* spp. (*Khora Bhetki*), *Lutijanus* spp. (*Lal Bhetki*), *Gerris satifer* (*Gerris*), *Nandus nandus* (*Nadosh*) and *Badis badis* (*Bhada*); of gobids, *Glosogobius giuris* (*Bele*), *Odontonbliopus rubicundus* (*Lal Gule*), *Aprocryptis bato* (*Kalo Gule*) and *Periopthalmus* spp.; of triculids, *Trichiurus savela* and *T. Haemela* (ribon fish or *Rupapati*); of scopiiids, *Harpodon neherius* (Bombay duck) and *Saurida* spp. (*Tumbil*); of car fish, *Hemiramphus* spp. (*Gang Dhara*) and *Belone cancila* (*Kankle*); of spinny eels, *Mastacembalus pankalus* (*Pankal*), *M. armatus* (*Pankal*) and *Rhincobdela aculata* (*Pankal*); of sillaginidae, only *Sillago* spp. (*Karma*); of stromatidae, *Parastromatius niger* (Black pomphret), *Pampus argentius* (Silver pomphret) and *P. sinensis* (White pomphret); of kurtidae, only *Kurtus indicus* (Glass fish); of Beiognathidae, only *Leiognathus* spp. (*Chanda*); of pleuronectidae, only Flat fishes (*Kukurjib*); of squamipinidae, only *Scatophagus argus* (*Paira Chanda*); of prawns, *Palemon carcinus* (*Galda Chingri*), *Palaeus indicus* (*Chapra Chingri*), *Penaeus carniatus* (*Bagda Chingri*), *Acetus* spp. (*Ghuso Chingri*) and *Metapenaeus* (*chingri*) and of lobster, *Panulirus* spp. are the chief species.[1]

[1] Source: District Fishery Officer, Howrah.

The following additional species are available in fresh water tanks, ponds, *jheels* and *bils*: of carps, *Catla catla* (*Katla*), *Labeo rohita* (*Rui*), *L. gonius* (*Goni*), *L. calbasu* (*Kalbaus*), *L. bata* (*Bata*), *Cirrhina mrigala* (*Mrigel*) and *C. reba* (*Reba*); of cat fishes, *wallagonia attu* (*Boal*), *Mystus aor* (*Air*), *M. gulio* (*Tangra*), *Rita rita* (*Rita*), *Pungasius pungasius* (*Pungash*), *silonia silonia* (*Silon*), *Callichorus pabda* (*Pabda*), *Eutropicthis vacha* (*Bacha*), *Clupisoma garua* (*Garua*); of feather backs, *Notopterus chitala* (*Chital*) and *N. notopterus* (*Folui*) are the chief species. Besides, there are fishes which thrive in the mud[1] such as *Anabas testudinius* (*Kai*), *Channa punctatus* (*Lata*), *C. striatus* (*Shol*), *Clarius batrachus* (*Magur*) and *Heteropneustis fossilis* (*Singhi*). Other sweet water fishes which also deserve a mention are *Glossogobius giuris* (*Beley*), *Xenentodon caucila* (*Kakly*), *Puntius ticto* (*Tit Punti*), *P. sarana* (*Saral Punti*), *Chela bacaila* (*Chela*), *C. phulo* (*Chela*), *Ompok pabo* (*Papda*), *Mastacembelus armatus* (*Ban*), *Amblypharyngodon mola* (*Maurala*), *Aspidoparia morar* (*Khalse*), *Colisa chuna* (*Khalisa*), *C. fasciatus* (*Khalisa*), *Opicephalus punctatus* (*Lata*), *O. marulius* (*Sal*), *O. gachua* (*Chang*), *Esomus danricus* (*Darke*), *Rasbora* spp. (*Rasbora*), *Panchax panchax* (*Techoka*), *dancunius* (*Dankuni*), *Ailia coilia* (*Banspata*) and *Mugil cascasia* (*Kachki*). In recent times, two exotic varieties, namely *Tilapia mossombica* and *Cyprinus carpio* have been successfully introduced into the district.

Five species of frogs, namely skipping frog, paddy field frog, bull frog, marshy toad and the common Indian toad are frequently met with.

CLIMATE

Location of observatories

There is no meteorological observatory in Howrah district. The data used for the interpretation of climate and weather are obtained from the Alipore Observatory in Calcutta, a few miles from the district headquarters. In the absence of micro-climatic data for the district itself, its general climatic setting alone is discussed here.

Climatic divisions and seasons

Situated in the Humid Subtropical Zone under the influence of the Bay of Bengal branch of the monsoon,[2] the district's climate enjoys the moderating effect of the sea. Dominated by the intense low pressure in summer and high pressure in winter in the north-west part of the sub-continent and a semi-permanent low pressure in the adjacent Chotanagpur area, the climate and weather of the district may be summed up on the basis of the three conventional seasons.[3]

[1] Source: Director, Zoological Survey of India.

[2] G. T. Trewartha—An Introduction to Climate, 3rd Edn. New York, 1954. pp. 94-9 and 302; O. H. K. Spate—India and Pakistan. London, 1957. p. 44.

[3] Source: The Deputy Director General of Observatories, Poona. Locally, the whole year is divided into six seasons which seem to have certain characteristics of their own. For air-mass characteristics see Hooghly District Gazetteer (New Series).

Cold dry season

The period from November to February[1] is the cold dry season. January is the coldest month with a mean daily maximum temperature of 26°C (78.8°F) and a mean daily minimum of 13°C (55.4°F). The mean diurnal variation is thus considerable. Towards the end of February, the days begin to be appreciably warmer. In December and January the mean monthly pressure rises to about 1,017 millibars[2] due mainly to the thermal variation and cold. Dry winds blow predominantly from the north, north-west and north-east. Cold spells, lasting usually for three or four days, are experienced in association with passing western disturbances or with cold waves occurring a little ahead of the winter depressions. The minimum temperature on such occasions may drop down to even 6 or 7°C (42.8 or 44.6°F).[3]

Rainfall[4] in the months of December and January is unusual as the winds then blow mostly from inland. It occurs in association with depressions travelling from the west[5] which occasionally reach this part of the country. There is a little rain, but it is usually below one inch in both the months. The lowest mean monthly rainfall (0.18") is in December while the highest of the season occurs in February (1.17")—the average for the season being 2.53". Heavy dews occur in November and the first half of December. As the season progresses, this becomes infrequent and less heavy. Humidity diminishes from 79 per cent in November to 82 per cent in February.

As a result of the anti-cyclonic conditions prevailing during most of the season, the sky remains usually clear though high clouds may be occasionally noticed. Low clouds associated with depressions are rarely found. At the beginning of the season the retreating monsoon often turns the weather stormy.

Fogs, mostly of radiation type,[6] occur only during this season (particularly in January and February) causing poor visibility while the Howrah city and its environs are enveloped in the evenings in unhealthy smoke fog[7] or smog. This, however, is the healthiest season of the year and for two months from the middle of January the weather is mild and bracing when incidence of diseases is at its lowest.

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[1] Data compiled for the period are from H. P. Blanford—A Practical Guide to the Climates and Weather of India etc. London, 1889. pp. 151-7, 225-9, 337-41; L. S. S. O'Malley—Bengal District Gazetteers: Howrah. Calcutta, 1909. pp. 14-6; S. P. Chatterjee—Bengal in Maps. Calcutta, 1949. pp. 18-29.

[2] Climatological Tables of Observatories in India. Indian Meteorological Department. Bombay, 1953. pp. 41-2.

[3] Source: The Deputy Director General of Observatories (Poona).

[4] Records of rainfall in the district are available for four stations for periods ranging from 60 to 91 years, the details of which are given in Tables I and II at the end of this chapter.

[5] S. Mull and B. N. Desai—"The Origin and Structure of the Winter Depressions of North West India," Ind. Met. Dept. Technical Note, No. 25; W. G. Kendrew—The Climate of the Continents. Oxford, 1937. pp. 115-6.

[6] S. C. Basu—"Fog forecasting over Calcutta and neighbourhood," Indian Journal of Meteorology & Geophysics, Vol. 3, No. 4, 1952. p. 281.

[7] Smoke provides the sulphurous hygroscopic nuclei for the origin of these fogs; *vide*, G. T. Trewartha—op. cit. p. 119.

Hot dry season

The period from March to the middle of June is the summer season.[1] A rapid rise of both the mean daily maximum and minimum temperatures occurs in March and April. May is generally the hottest month with the mean daily maximum at about 35.3°C (95.5°F) and the mean daily minimum at about 25.5°C (77.9°F). The sensible temperatures in the evening are often lowered (from the middle of March to the middle of May) by a steady sea-breeze which blows from the south and occasionally from the south-west.[2] This cooling effect is felt mostly in the riverside areas.[3] Hail-storms sometimes occur in March and April. Just before the monsoon bursts, the winds frequently fail altogether and the weather becomes humid and sultry.[4]

Temperatures fall substantially with the visitations of thunderstorms[5] (popularly known as nor'westers and locally called 'Kal-Baisakhis')[6] in the afternoons from March to May. The period from 6 a.m. to 1 p.m. is comparatively free from such disturbances.[7] Of the four types of thunderstorms in Bengal, classified according to their origin and movement, type A, accounting for 45 per cent of the total number originates from the Chotanagpur area and proceeds in a north-west to south-east direction with a velocity of about 30 to 40 miles per hour. Types B, C and D originate from the foothills flanking the northern and eastern borders of Bengal and Assam and are differentiated according to their places of origin—those starting from the submontane districts of North Bengal are classified as type B, those from the eastern hills as type C and those from the foot of the Khasi hills as type D. In April and May, when the aforesaid tropical continental air-masses are underlain by a tropical maritime air-mass, unstable weather conditions prevail causing thundersqualls and heavy rains. These are the nor'westers *(Kāl-Baisākhi)*. These severe squalls, which are associated with the thunderstorms classified under type A, move with an average

[1] The observation of the Deputy Director General of Observatories, Poona, that the period from March to May is the summer season is untenable. It is not before the second week of June, when the south-west monsoon bursts with heavy rain, that the oppressive summer temperatures are brought down.

[2] L. S. S. O'Malley—op. cit. p. 14.

[3] S. P. Chatterjee—op. cit. p. 18. He mentions of the penetration of oceanic influences up the valleys of the Rupnarayan and the Bhagirathi.

[4] L. S. S. O'Malley—op. cit. pp. 14-5.

[5] V. V. Sohoni– "Temperature changes in Calcutta thunderstorms," Ind. Met. Dept., Scientific Notes, Vol. IV, No. 33, pp. 19, 25. Sohoni mentions that the usual dry bulb temperature records a fall of 7.5°F. or 4.2°C., and the average rainfall associated with a thunderstorm is 0.5 inch or 1.3 cm.

[6] *Kāl-Baisākhi* (literally, a calamity in the month of *Baisākh*) usually occurs in the month of *Baisākh* which corresponds to the period from the middle of April to the middle of May.

[7] Late Rai Bahadur Chatterjee & Others—"Nor'westers of Bengal," Ind. Met. Dept. Technical Notes, No. 10, 1944, p. 1; V. V. Sohoni, in the Tech. Notes referred to above, Vol. I, No. 3, 1928. p. 28 mentions the usual occurrence of these storms from 4 to 9 p.m., the maximum number taking place between 5 and 8 p.m.

speed of 40 to 60 miles per hour. They, sometimes, bring hail.[1] The marked diurnal variation of temperature and insolation accentuates the trough of low pressure in the afternoon resulting in the flow of the moist maritime air-mass towards the western part of West Bengal. The initial start, needed for the beginning of the thunderstorm, is provided by the afternoon insolation[2] and the rising of the air is caused by the orography of the Chotanagpur hills.[3] Following this, the next movement is caused by the downward current of cold air[4] and the series starts moving from the north-west usually against the direction of flow of moist air.[5] Solar insolation reaching its maximum in the afternoons thus breaks the latent instability of the atmosphere and the energy thus released appears as thunder-squalls which are usually short-lived.[6] Storms and depressions from the Bay of Bengal often reach the district at the end of summer and the landward winds sometimes throw up tidal bores which whirl up the Bhagirathi.

Rainy season

The monsoons last from the middle of June to October when the south-east and south-west winds blow with accelerated velocity. The burst of the monsoon towards the middle of June[7] brings merciful relief to the parched countryside. The mean daily maximum temperature of 92.4°F. in June drops to 89.5°F. in July. Towards the end of October and early November, when the monsoon withdraws, there is an appreciable fall of night temperature with reduced diurnal variations which are 15.4°F. in October and 20.5°F. in November. Barometric pressure falls to its lowest in June and July, remains stationary during August and ascends from September. The east and south-east winds now become apparent together with the steady and predominating south and south-west winds of the early rainy season until the winds gradually veer later in the season. In October, the north winds become predominant. The cumulus and cumulo-

[1] Compiled from Late Rai Bahadur Chatterjee & Others—op. cit. p. 2; P. Koteswaran and A. C. Dey—"Study of Pre-monsoon thunderstorms over Gangetic West Bengal by radar," Ind. Journ. of Met. & Geo., Vol. X, No. 3. pp. 275-82.

[2] This may be contrasted with the weather conditions of the rainy season when night temperatures rise further as the heat received from the sun by insolation during longer days exceeds the amount lost by radiation during shorter and often clouded nights. With the invasion of the homogeneous equatorial air-mass, the tropical air-mass fades away and this accounts for low diurnal range of temperature, cloudy to completely overcast sky, and rain or drizzle of the monsoon season.

[3] V. V. Sohoni—op. cit. p. 34 and Vol. IV, No. 33, p. 19.

[4] G. Chatterjee and N. Sur—Ind. Met. Dept., Memoir, Vol. XXVI, pt. IX, 1938.

[5] Late Rai Bahadur Chatterjee and others—op. cit. p. 4; V. V. Sohoni—op. cit. suggests that undercutting of moist air by cold winds is responsible for the origin of these thunderstorms.

[6] H. F. Blanford—op. cit. pp. 81-4, 153.

[7] In his famous poem "Meghadutam", Kalidasa, the ancient Indian poet, fixes the date of the advent of the monsoon on the first day of the month of *Asadha* corresponding to the middle of June.

nimbus clouds associated with the nor'westers are now replaced by strato-cumulus, alto-stratus, nimbo-stratus or stratus clouds.

Squalls and thunderstorms begin to decrease in frequency from the end of June. During typical monsoon months most of the storms having a gale force originate in the north of the Bay and move west or north-west and the depressions bring about copious precipitation, occasionally associated with thunder. Heavy rain follows the burst of the monsoon which is usually accompanied by a cyclonic storm.[1] July and August are the rainiest months with 17.5 and 18 mean rainy days. In August it sometimes rains for days together. The late monsoon months of September and October record comparatively less precipitation unless there are cyclones, which are then very rare.

Dew starts falling from about the middle of October while fogs appear at about the same time. High humidity and wet-bulb temperatures make the weather very uncomfortable especially during spells of incessant rain. The position deteriorates further from August to mid-September when relieving breezes frequently fail. Relative humidities are, however, generally high throughout the year varying between 65 and 85 per cent. When winds are blowing, as is common in summer afternoons, the lower humidity around 50 per cent does not sufficiently reduce the oppressive heat.

Heavy rain-bearing and low-lying nimbus clouds usually cover the sky up to September, there being occasional bright spells towards the end of this period. During the post-monsoon season, i.e. between October and November, the tropical continental air-mass in the process of transition to tropical maritime air-mass bring about fair to fine weather and except for early morning ground mists, visibility conditions are good. The period of the retreating monsoon has been very well described by O'Malley:[2] "The wind now changes gradually to north and the barometric pressure becomes variable, but rises to 29.90. The mean temperature slowly falls to 70° early in November and the nights become cooler, the mean diurnal variation being 15°. Rainfall diminishes to 4 inches in October and there are only 5 to 10 rainy days in the month; humidity falls to 80 per cent and the aqueous vapour pressure is from 0.800 to 0.850. Rain gives place to dews at night; but the chief peculiarity of this period is that in the wake of the retreating monsoon follow numerous storms."

Rainfall

The average annual rainfall, which is 1,664.9 mm (65.55"), generally increases from the south-east to the north-west of the district. The monsoon rainfall from June to September constitutes about 75% of the annual normal rainfall. July and August are the rainiest months. The variation in precipitation from year to year is not large. In the 50-year period from 1901 to 1950 the highest annual rainfall occurred

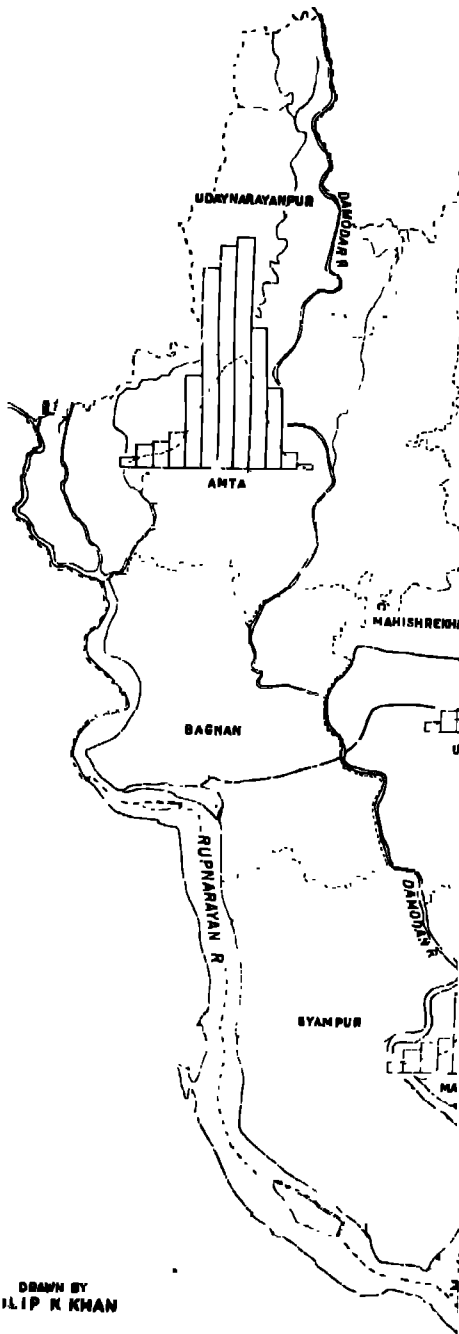
[1] H. F. Blanford—op. cit. p. 153.
[2] L. S. S. O'Malley—op. cit. p. 15.

UDAYNARAYANPUR
DAMODAR R
AMTA
MAHISHREKHA
BAGNAN
RUPNARAYAN R
DAMODAR R
SYAMPUR
DRAWN BY
DILIP K KHAN

TABLE I—NORMALS AND EXTREMES OF RAINFALL IN HOWRAH DISTRICT

Station	No. of years of data		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual	Highest annual rain-fall as % of normal & year**	Lowest annual rain-fall as % of normal & year**	Heaviest rainfall in 24 hours*	
																		Amount (mm)	Date
Howrah	48	a	11.2	28.5	32.8	50.0	117.6	284.2	323.6	314.2	230.1	123.4	17.3	3.6	1535.7	150 (1933)	61 (1911)	356.9	20.9.1900
		b	0.9	1.7	2.0	3.1	6.3	12.5	16.3	16.7	12.5	6.0	1.0	0.3	79.3				
Uluberia	50	a	15.7	34.3	34.8	53.6	144.3	303.0	360.9	356.4 #	208.0	127.8	24.6	4.1	1667.5	150	56	269.2	2.8.1922
		b	1.1	2.1	2.1	3.3	6.9	13.0	17.3	17.1	11.8	6.1	1.3	0.4	82.5				
Amta	50	a	12.7	34.0	40.1	56.6	145.5	314.2	348.7	357.9	220.0	124.7	28.2	3.8	1686.4	159 (1949)	63 (1911)	304.8	2.8.1922
		b	1.0	1.9	2.2	3.4	7.2	12.1	15.9	17.4	11.6	5.5	1.2	0.2	79.6				
Mahisrekha	31	a	15.0	35.6	49.0	54.4	124.5	350.0	402.3	375.9	218.9	119.9	19.1	3.8	1769.4	158 (1913)	60 (1911)	391.7	24.8.1888
		b	1.0	1.9	2.5	3.5	6.7	12.5	16.9	17.0	11.9	5.4	1.3	0.3	80.9				
Howrah (Dist.)		a	13.7	33.1	39.0	53.7	133.0	312.9	358.9	351.3	219.3	123.9	22.3	3.8	1664.9	139	60		
		b	1.0	1.9	2.2	3.3	6.8	12.5	16.6	17.1	11.9	5.7	1.2	0.3	80.5				

(a) Normal rainfall in mm. (b) Average number of rainy days (days with rain of 2.5 mm or more).

* Based on all available data up to 1955. ** Years given in brackets.

in 1933 when it was *139%* of the normal while the lowest, only 60% of the normal, was recorded *in 1911*. During the same fifty years, rainfall less than 80% of the normal occurred only in five years, none of them being consecutive. It will be seen from Table-II below that annual rainfall in the district varied between 1400 and 1900 mm (55.12" and 74.80") in 30 out of the 49 years for which relevant data are available. On an average there are 81 rainy days (i.e. days with a rainfall of 2.5 mm 10 cents or more) in a year in the district. The number varies from 79 at Howrah to 83 at Uluberia. The heaviest rainfall in 24 hours recorded at any station in the district was 391.7 mm (15.42") at Mahisrekha on August 24, 1888.

TABLE—II

FREQUENCY OF ANNUAL RAINFALL IN HOWRAH DISTRICT (DATE 1901-50)

Range in mm	No. of years	Range in mm	No. of years	Range in mm	No. of years
901-1000	1	1401-1500	9	1901-2000	1
1001-1100	1	1501-1600	6	2001-2100	1
1101-1200	1	1601-1700	7	2101-2200	2
1201-1300	2	1701-1800	3	2201-2300	5
1301-1400	3	1801-1900	5	2301-2400	2

"Generally speaking, the healthiest season is from the middle of January to the middle of March, when it is mildly cold and fairly bracing. In the hot weather from the middle of March to the middle of May, the heat, though great in the day-time, is alleviated in the afternoon by a southerly seabreeze. This season is consequently not unpleasant and is fairly heatlhy. The most unhealthy season is from September to the middle of January, when dews fall and the air and earth are charged with moisture, malarial fevers and bowel complaints being common."[1]

[1] L. S. S. O'Malley—op. cit. p. 15.

CHAPTER II

HISTORY

PRE-HISTORY & PROTO-HISTORY

The one or two seemingly pre-historic artefacts found in the district so far from surface explorations lack positive stratigraphic evidence to corroborate their assumed ancientness. Only typologically they display some similarities with pre-historic artefacts found elsewhere, which may be purely fortuitous. One such implement, a highly polished green stone celt, typologically similar to neolithic celts found from Tamluk in adjacent Midnapur district, is at the Anandaniketan Kirtisala in the village of Nabasan in Bagnan P.S. It was discovered at Harinarayanpur in *mauzā* Mugkalyan (Bagnan P.S.) on the left bank of the river Rupnarayan, some 10 miles upstream (N.N.W.) from Tamluk. Few tools and implements have so far been found in the district which can be taken on unassailable stratigraphic-cum-typological evidence to be of pre-historic origin. And this is not unexpected in a recent alluvial tract where constant deposit of river borne silt has helped in the quick decomposition of embedded materials.

Geologically, the whole of the district up to a considerable depth from the surface belongs to the recent alluvial period and has been subject to frequent deltaic shifts and consequent heavy depositions. "Judging from the results of boring in . . . 1835-40, the depth of deposit is very great. The boring reached a depth of 481 feet without signs of either a rocky bottom or marine beds. At a depth of 20 feet below the surface, i.e., about 10 feet below sea level, beads of peat with wood were found."[1] This stratum, in all probability, belonged to the early historic period. "The wood in the upper peat beds was examined and found to be of two kinds, one of which was recognized as belonging to the *sundari* tree (*Heritiera littoralis*), which grows in abundance on the muddy flats of the Ganges delta, while the other was probably the root of a climbing plant resembling *Briedelia*. At considerable depths bones of terrestrial mammals fluviatile reptiles were found, but the only fragments of shells noticed, at 380 feet, are said to have been of fresh-water species."[2] But practically no remains of man or man-made objects have been found, though such

[1] L. S. S. O'Malley & Monmohan Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 12.
[2] loc. cit.

discoveries are never ruled out. In fact, from the recent alluvial tracts around Tamluk in the adjacent district of Midnapur a quantity of neolithic tools and implements have been found which have prompted Shri M. N. Despande of the Archaeological Survey of India to fix, on stratigraphic grounds, the upper limit of the neolithic culture there at the 3rd century B.C.[1]

ANCIENT PERIOD

No specific reference to the tract now comprised in Howrah district is found either in the early literature of the Jains, Buddhists and Hindus or in the writings of the Greek and Chinese travellers, historians and geographers. Archaeological remains found within the district, besides being scanty, have not yet been properly studied, categorized and dated. Any conclusion reached by interpolating indirect and distantly connected evidence is, therefore, bound to be conjectural and somewhat circumspect.

Connexions with Tāmralipta or Tāmralipti: archaeological evidence

Geographical nearness of Howrah to Tamluk, identified with the very ancient sea port of Tāmralipta or Tāmralipti,[2] has prompted some local historian to conclude that at a remote period at least the southern part of the district lay within the sphere of civilization, economy and political influence of Tāmralipta. Recent excavations have revealed that "the town (Tāmralipta) had been in occupation from the neolithic to modern times with occasional breaks."[3]

Material culture obtaining in the Tamluk area in Period I was characterized by neolithic celts and ill-fired pottery. The cultural equipments of Period II, roughly ascribed to the third and second B.C., consisted of beautiful and typical terracotta figurines, cast copper coins and pottery bearing close affinity with that of contemporary northern India.[4] The Harinarayanpur-Mugkalyan area within Bagnan police station and the Bachhri-Khajuri region within the Syampore thana, especially the latter, some 10 and 6 miles respectively to the north-east of Tamluk across the Rupnarayan, have yielded from underground as also from the surface a number of cast copper coins, terracotta figurines and black coloured pottery fragments with polished surfaces.[5] (No regular excavation has yet been carried out in any of these sites. But on such occasions as the digging of a tank or a well, the sites—especially the one around the mounds known as Damdama in Bachhri—yield terracotta objects, potteries and coins

[1] A. Ghosh (Ed.)—Indian Archaeology: A Review 1954-55. Delhi, 1955. pp. 19-20.

A. H. Dani—Pre-history and Proto-history of Eastern India. Calcutta, 1960. pp. 87, 100-01.

[2] A Ghosh (Ed.)—op. cit. p. 19.

[3] loc. cit.

[4] loc. cit.

[5] Whether these can be classed with the Northern Black Polished pottery, that flourished in north India between 360 B.C. and A.D. 200, and found among other sites from Tamluk, has not yet been ascertained. *Vide*, Ancient India. Nos. I & II.

from lower levels and architectural members and sculptures attributable to the Pala period from nearer the surface. Some of the finds now in the possession of Sarat Smriti Sangrahasala in Panitras and Anandaniketan Kristisala museum in Nabasan (both in Bagnan P.S.) have not yet been properly studied, categorized and dated).

Evidence of the Greek writers

"In Period III (*circa* first-second centuries A.D.), Tamluk seemed to have shared with other ports on the Indian coasts trade contacts with the Roman world, as witnessed by a sprinkler and the profuse occurrence of the rouletted ware, both believed to be ultimately originating from Rome."[1] Ptolemy, the famous Greek geographer and astronomer who flourished towards the middle of the second century, mentions in his famous Geography the name of a city called Tamalites which was to the east-south-east of Palibothra or Pāṭaliputra and standing on the Kambyson or the westernmost mouth of the Ganges. This port city has been fairly accurately identified with Tāmralipta or modern Tamluk.[2] It is not clear from Ptolemy's account as to which kingdom or administrative unit this city actually belonged. There is, therefore, no way of knowing whether the present Howrah district or any portion of it fell within the same kingdom which also included Tāmralipti. Nonetheless, it is conceivable that the district formed a part of the hinterland of the port of Tamalites or Tāmralipta.

Gangaridai

Besides Ptolemy, several other Greek travellers, historians and geographers have left behind accounts of Eastern India covering approximately the period from the fourth century B.C. to the second century A.D. and giving valuable information about the administrative divisions and the peoples of this part of the country.

From the latter half of the fourth century B.C., the greater portion of Bengal formed a powerful kingdom which the contemporary Greek and Latin writers called Gangaridai or Gandaridai or Gangaridae or Gangaritai, interpreted by classical scholars to mean "the people of the Ganges region." According to Curtius Rufus, Plutarch and Solinus Gangaridae lay to the east of the Ganges near its confluence with the sea. But Pliny and Ptolemy inform us that all the tracts around the many mouths of the Ganges, including the Bhagirathi, were inhabited by people of Gangaridae.[3] Writing about the political geography of Eastern India, the famous Sicilian author Diodorus (49 B.C.--A.D. 14) says that the people of Prasioi and their eastern neighbours the Gangaridai were united under one kingdom. To Curtius Rufus, the Gangaridae and the Prasii were two nations, but he speaks only of one king—Agrammes (Augraseni ?).[4]

[1] ibid. p. 20.
[2] R. C. Majumdar—Classical Accounts of India. Calcutta, 1960. pp. 367-75.
[3] ibid. p. 375.
[4] ibid. p. 128.

It is not certain whether this joint kingdom of Gangaridae and Prasii included Tamalites and the territories within the present Howrah district. According to Dr. B. C. Sen, the Greek geographers had confused Prasioi and Gangaridai as two nations within one kingdom while the fact apparently was that in the face of Alexander's invasion these two kingdoms temporarily came together under one leader, for Pliny at one place obliquely suggests an alliance between Gangaridae and Kalinga in the expression "*Gangaridum-Calingarum*" as distinct from any Prasii-Gangaridae confederation. This might have been occasioned by another alarm caused by the growth of the military might of Magadha. If, however, the Gangaridai-Kalinga rapport was based on a geographical continuity, then it can be assumed that the tracts forming the Howrah district of today was a part of either of these two kingdoms. According to McCrindle, "the Gangaridae or Gangarides occupied the region corresponding roughly with that now called Lower Bengal and consisted of various indigenous tribes, which in the course of time became more or less Aryanized."[1]

Suhma

The more common appelations of the regions to any or several of which the present Howrah district belonged in ancient times were Lāḍha or Rāḍha, Suhma and Tāmralipta. The earliest reference to Rāḍha as Lāḍha and Suhma as Subbabhūmi is found in *Āchārāṅga-sūtra*, the oldest of the Jaina sacred books, the tradition of which dates from about the fifth century B.C.[2] The text describes how Mahavira, the twenty-third Tirthankara, travelled in Vajjabhūmi, one of the two divisions of Lāḍha country, the other being Subhabhūmi.[3] Lāḍha has been convincingly identified with the Rāḍha region[4] while Vajrabhūmi (Vajjabhūmi) has been identified with the jungly lateritic part of Western Bengal. The Subbabhūmi of the ancient Jaina texts *Āchārāṅgasutra*, *Kalpasūtra* and *Bhagavatisūtra* is perhaps the same as Sumbha figuring in a Buddhist *Jātaka* story where a town called Desaka is mentioned. *Samyuttanikāya*, a Buddhist text of a much later date, also refers to the Sumbha country and a town in it named Setaka or Sedak.[5] But reference to this region in early Buddhist or Hindu texts is far less than in Jaina texts. Subbabhūmi of the Jainas has also been identified with Suhma of the *Mahābhāshya* of Patanjali of the second century B.C. According to the *Sabhāparva* of the *Mahābhārata*, which was compiled in its present form in the

[1] J. W. McCrindle—Ancient India as Described by Megasthenes and Arrian. Calcutta, 1926. p. 136.
[2] Max Muller (Ed.), H. Jacobi—Sacred Books of the East. Vol. XII, Jaina-Sutras. London. pp. 84-5.
[3] Hirakumari (Tr.)—*Āchārāṅgasutra. 1st sruta skandha*. Calcutta (undated).
[4] R. C. Majumdar (Ed.), H. C. Raychaudhuri—History of Bengal , Vol. I. Dacca, 1943, p. 36; B. C. Sen—Some Historical Aspects of the Inscriptions of Bengal. Calcutta, 1942. p. 46.
[5] Sashi Bhusan Chaudhuri—Ethnic Settlement in Ancient India. Calcutta, 1955. p. 158.

Gupta period, Suhma was the name of a people, who lived to the east of Magadha, south of Nepal, west of the river Lauhitya and on the sea-shore and were defeated by the Pandava hero Bhima. Suhmas were the neighbouring people of the Paundras, the Tāmraliptakas and the Vangas and were divided into Prasuhmas and Suhmas proper, the former living in the western part of the Suhma country. In the *Brihat Samhitā* of Barāhamihira of the 6th century A.D., Suhma has been referred to as an eastern country[1] which is corroborated by the *Mārkandeya Purāṇa* of the same century. The twelfth century work *Pavanadūtam* by Dhoyi, the court poet of Laskhmanasena, places Suhma on the bank of the Ganges (Bhagirathi). Basing our conclusions on all this evidence, Suhma possibly included a large part of littoral West Bengal. Over the long period under review, its geographical connotation perhaps varied, assuming a socio-cultural entity at one time and a politico-administrative-geographic connotation at another. According to Nilkanṭha, a commentator of the *Mahābhārata*, Suhma was co-extensive with Rāḍha. This might not be strictly correct, yet it gives an idea of the extensiveness of the Suhma country. Probodhchandra Sen suggests that Suhma included the greater part of the present-day Howrah district[2] and this is corroborated by Sashi Bhusan Chaudhuri who says: "The natural presumption is that Suhma was a part of Rāḍha in very early times, perhaps only its southern portion, and corresponded to the modern districts of Howrah and Midnapore."[3]

Tāmralipta

It has been stated earlier that the information furnished by Ptolemy does not permit us to place Tamalites (Tāmralipta) specifically in any of the contemporary kingdoms. In *Prajñāpaṇa*, the Jaina sacred book, Tāmralipta is mentioned as forming a part of Vaṅga. Tāmralipta also occurs in the *Digvijaya* section of the *Sabhāparva* of the *Mahābhārata* which was compiled in its present form around the fourth-fifth century A.D. There it is not only distinguished from the territories known to have been situated in Northern, Eastern and Central Bengal but also from Suhma.[4] From the evidence of the epic, it seems Tāmralipta was an independent territory inhabited by a people called Tāmraliptakas. But it is not clear whether a portion of the present Howrah district was included within this territory or whether the whole of the present district comprised a part of the Suhma country. Dandin, an author of the sixth century A.D., included, in his *Daśakumārucharitam*, the city of Dāmalipta or Tāmralipta

[1] *Brihat Samhitā* of Barāhamihira, Chapter XIV, verse 5 and chapter XVI, verse 37.

[2] P. C. Sen—Some Janapadas of Ancient Rāḍha, in Indian Historical Quarterly, Vol. VIII, 1932. pp. 524-9.

[3] Sashi Bhusan Chaudhuri—Ethnic Settlements in Ancient India. Calcutta, 1955. pp. 159-61.

[4] R. C. Majumdar (Ed.), H. C. Raychaudhuri—History of Bengal, Vol. I. Dacca, 1943. p. 22.

within Suhma.[1] It may, therefore, be reasonably inferred that the whole of the present Howrah district was within Suhma. Though at times the port town Tāmralipta with its adjoining territories (there is no way of knowing whether the 'adjoining territories' extended up to the south-western parts of the present Howrah district) formed a separate kingdom, it seems that for the greater part of the ancient period this area belonged to Suhma or the southern Rāḍha country[2] and that its economic and political life was closely linked with that of the latter.

Position of the district during Maurya period

Whether the district was included in the Maurya Empire is difficult to say. The only evidence of Mauryan hegemony in Bengal is found in an inscription of the fourth century B.C. from Mahāsthān (in Bogra district of Bangladesh).[3] But it is by no means certain if Mahāsthān's (or Pundranagara's) sway extended as far south as Howrah.

Megasthenes' account[4] of the Maurya Empire during the rule of Chandragupta Maurya reveals that the kingdom of Gangaridai with its capital at Parthalais or Portalis and having a king commanding a vast army was independent of the Maurya Empire which had its capital at Palibothra (Pāṭaliputra). We may also infer that the kingdoms of Kalinga and Gangaridai were allied against the Mauryan power but we are not sure whether Asoka annexed Gangaridai to his empire before or after his Kalinga conquest. Some historians believed that Asoka conquered Gangaridai along with Kalinga but there is little doubt that during the reign of his weak successors, Gangaridai was independent of the Magadhan Empire.[5]

Position of the district during Gupta period

According to the *Purāṇas*, in the intervening period between the Mauryas and the Guptas, the Devaraksitas ruled over the Kosalas, Andhras, Paundras and Tāmraliptas, and countries on the sea-shore. Nothing is known about the Devaraksitas from any other sources. R. C. Majumdar thinks that they belonged to the kingdom of Devarastra (mentioned in the Allahabad inscription of Samudragupta) situated in the Vizagapattam district.[6]

The establishment of the Gupta Empire marks the end of the independent existence of the various states that flourished in Bengal at the beginning of the 4th century A.D. with the exception of

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[1] loc. cit.

[2] cf. S. B. Chaudhuri—op. cit. p. 161

[3] R. C. Majumdar (Ed.)—op. cit. p. 44. (The Mahāsthān inscription appears to be slightly pre-Asokan on palaeographic grounds. There is also no evidence to show that it was Mauryan. —Ed.)

[4] J. W. McCrindle—op. cit. pp. 129, 137-9.

[5] Promode Lal Paul—The Early History of Bengal, Vol. I Calcutta, 1939. pp. 5-6. (The second separate Kalinga Rock edict of Asoka mentions unconquered people on the border of Asoka's empire. The second Rock edict mentioned all the border kingdoms by name. In the face of this statement the separate mention of unconquered people on the border can only refer to the people of Gangaridae.—Ed.)

[6] *ibid.* p. 7.

Samataṭa, Bengal was definitely incorporated in the Gupta Empire by the time of Samudragupta. ... Whether the subjugation of Bengal took place during the region of Samudragupta or was accomplished wholly or even partly by his father, it is difficult to decide An inscription engraved on an iron pillar at Meherauli ... at Delhi, mentions, among other military exploits of a king called Chandra, that he 'extirpated in battle in Vaṅga countries his enemies who offered him united resistance.' In absence of full details about this king Chandra, his identity is a matter of great uncertainty. ...He has been identified, for example, both with Chandragupta I and Chandragupta II. In the former case one must hold that the father of Samudragupta had already added Vaṅga to Gupta Empire. In the latter case, it must be presumed that Vaṅga had shaken off the yoke of the Gupta Empire and the son of Samudragupta had to re-conquer the province by defeating the combination of the peoples of different states of Bengal.

"Evidence is not altogether lacking that Samudragupta himself carried the victorious arms to Bengal. For among the kings of Āryāvarta who were, according to Allahabad Prasasti, uprooted by Samudragupta, we find the name of Chandravarman who may be reasonably identified with the king of that name mentioned in the Susunia inscription as the ruler of Pushkaraṇā."[1] This Pushkaraṇā has been identified with the village Pakhanna in Bankura district. 'Chandravarman may thus be regarded as the king of Rāḍha or the region immediately to its south, by defeating whom Samudragupta paved the way for the conquest of Bengal."[2] Although there is no direct epigraphic evidence to prove that the present Howrah district formed a part of the Gupta Empire, cogent indirect evidence would tend to make that conclusion inevitable.

At the beginning of the 6th century, Rāḍha, which belonged to the Vardhamāna-*bhukti*, was administered by Vijayasena, a governor of Vainyagupta of Samataṭa, a scion of the Gupta dynasty. That Vardhamāna formed a *bhukti* is also confirmed by the 6th century copper-plate grant of king Gopachandra found in the village of Mallasarul within the Galsi police station of Burdwan district. This *bhukti*, in all probability, comprised extensive tracts of Rāḍha but it is difficult to say whether it included the northern and eastern parts (the most likely ones) of the Howrah district of today.[3]

Decline of Gupta power and aftermath

By the middle of the 6th century, Gupta power was declining in Bengal and the feudatory chiefs and governors of the imperial Guptas were asserting their independence. One of them was Gopachandra of the Mallasarul grant whose Uparika or Governor in Vardhamāna-*bhukti* was one Vijayasena, who was probably at the same post

[1] R. C. Majumdar (Ed.)—op. cit. pp. 47-8.
[2] loc. cit.
[3] ibid. pp. 49-50.

previously under Vainyagupta and continued in it under Mahārajādhirāja Gopachandra. It seems from another copper-plate grant of Gopachandra, found in the village of Kotalipara in Faridpur district (in Bangla Desh), that he had taken over Vainyagupta's territories which included the eastern, southern and south-western Bengal. Gopachandra's line probably continued in Dharmāditya and Samāchāradeva, whose inscriptions have been found in East Bengal. On grounds of geographical continuity, it may be reasonably inferred that Gopachandra's kingdom included the eastern, south-eastern and northern, if not the western parts of the present Howrah District.[1] How this kingdom came to an end is not known. The reference to the sea found in the Haraha inscription of A.D.554 in connexion with the Maukhari King Isānavarmana's conflict with the king of Gauḍa indicates that it took place in the southern part of western Bengal from which it may be presumed that by the latter half of the 6th century the control over this part of Bengal had passed to the king of Gauḍa.[2]

Some time before A.D. 606 Sasāṅka became the king of Gauḍa with his capital at Karṇasuvarṇa, now identified with Rangamati-Kansonapur near the Chiruti railway station in Murshidabad district. "There is hardly any doubt that both northern and western Bengal were included in the domains of Sasāṅka. . . . Whatever may be the extent of his rule in Bengal, Sasāṅka's dominions probably included Magadha from the very beginning."[3] From an inscription found in the village of Soro in Balasore district of Orissa, N. G. Majumdar has conclusively proved that Uttara Tosāli, which was included within Odra-*vishaya*, was within the empire of Sasāṅka Narendra.[4] A copper-plate inscription of a land grant found in Midnapur district and now preserved in the Midnapur Sahitya Parishad, records that "while Sasāṅka was ruling the earth, his feudatory Sāmanta Mahārājā Shri Somadatta was governing the province of Dandabhukti joined to Utakaladesa."[5] Dandabhukti has been identified by scholars with the land "between Orissa and Bengal corresponding to the southern and south-eastern parts of Midnapur district" and the name seems to survive in modern Dantan in that district, not far from the Suvarnarekha river.[6] Thus, while all the territories surrounding the present Howrah district were included in Sasāṅka's Empire, it may be reasonably inferred that his suzerainty also extended over the area now comprising it although details are lacking as to the vassal chiefs who ruled over this region or the *vishaya*, *bhukti* or *mandala* to which it belonged.

Sasāṅka's empire broke up with his death. Hiuen-Tsang, who

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[1] Ibid. pp. 50-4.
[2] ibid. pp. 56-7.
[3] ibid. pp. 51-4.
[4] Source : R. C. Majumdar.
[5] loc. cit.
[6] R. C. Majumdar (Ed.)—op. cit. p. 27.

visited Bengal about A.D. 638, shortly after Sasāṅka's death, mentions, besides Kajaṅgala (the territory around Rajmahal), four kingdoms in Bengal proper, namely Pundravardhana, Karṇasuvarṇa, Samataṭa and Tāmralipti. The first two once formed the heart of Sasāṅka's empire. Whether Karṇasuvarṇa or Tāmralipti included any part of modern Howrah district is difficult to say. Hiuen-Tsang said that the kingdom of *Tan-mo-lihi-ti* (Tāmralipti) was 1400 or 1500 li in circuit.[1] The possibility cannot, therefore, be ruled out that Tāmaralipti, which rose as an independent kingdom after Sasāṅka's demise, had within its bounds certain areas of the modern Howrah district and that a large part of it served as a hinterland to the great port of Tāmralipta from where another Chinese traveller, Fa Hien, sailed to China on his way back from India.[2]

Position of the district during Pāla-Kamboja period

The political disintegration of the Gauḍa Empire after the death of Sasāṅka was so complete that nothing much is known about the condition of Bengal until the rise of the Pāla power. From the evidence of the Buddhist text *Ārya-Manjusri-Mūlakalpa* it is learnt that during this interregnum Bengal was divided into many small principalities with varying administrative structures and each fighting with the others for survival.[3] How the region now forming the Howrah district fared during this period of political darkness is not known. The anarchical conditions lasting for more than a hundred years came to an end about the middle of the 8th century A.D., with the election of Gopāla as the ruler by the *Prakriti* (the general populace) to end the state of *Mātsyanyāya* (literally, a situation where one fish devours another; figuratively, rule of force). Thus began the supremacy of the Pālas. On the testimony of the Monghyr copper-plate of Devapāla which states that Gopāla conquered the earth as far as the sea, it may be reasonably supposed that the whole or a considerable portion of present-day Howrah district was included in his domain.

When Gopāla's son Dharmapāla was ruling Bengal, Sivakara I of the Bhauma-Kara dynasty of Utkala invaded and subjugated the Rāḍha country for a while.[4] Pāla records do not mention any confrontation of Dharmapāla with any Utkala king. The Orissan records also show that Sivakara I did not have to face the Pāla power in the process of his conquest of Rāḍha. It may, therefore, be inferred that until then the Pāla Empire did not include certain parts of southern Rāḍha, over which Sivakara had a short-lived suzerainty. But Dharmapāla's son Devapāla, on becoming king, led a victorious expedition to Utkala and annexed that kingdom.[6]

[1] T. Watters (translated and edited)—On Yuan Chwang. London, 1904. p 189.
[2] Sashi Bhusan Chaudhuri—op. cit. p. 160.
[3] R. C. Majumdar (Ed.)—History of Bengal, Vol. I. pp. 79-80.
[4] Neulpur copper-plate inscription of Sivakara I and Talcher copper-plate inscription of Suvakara III; H. K. Mahatab—History of Orissa, Vol. I. Cuttack, 1959. p. 134.
[6] Badal Pillar inscription, cited in R. C. Majumdar (Ed.)—op. cit. p. 117.

Pāla power did not survive for long in this area after the death of Devapāla. Utkala must have regained its independence soon after through the efforts of Suvakara III who appears to have established himself as a powerful monarch. His vassal Raṇastambha, belonging to the Sulki family of Dhenkanal-Talcher region, is said to have extended his kingdom up to certain parts of the southern Rāḍha country.[1] The reign of Nārāyanapāla, the fifth king of the Pāla dynasty, witnessed a series of conflicts with the Rāṣṭrakūṭas, the Kalachuris and the Chandellas.

The Bangarh inscription of Mahipāla I[2] suggests that portion of the Pāla kingdom had been taken over by a usurper. From the Dinajpur pillar inscription[3] we know that portions of North Bengal had been occupied by the Kambojas. The Irda copper-plate grant of Nāyapāladeva issued from his capital city Priyaṅgu in Vardhamāna-*bhukti*, was a grant made by a Kamboja and not a Pāla king. This copper-plate grant is an important record so far as it concerns Rāḍha in the 10th and the 11th centuries. "This grant was issued from the capital city called Priyaṅgu and records grant of land in Vardhamāna-*bhukti* (Burdwan Division) by the Paramesvara Paramabhaṭṭaraka Mahārājādhirāja (title of an independent sovereign) the illustrious Nāyapāladeva in the 13th year of his reign. He had succeeded his elder brother Nārāyanapāla, who was the son of Rājyapāla and Bhāgyadevi. Rājyapāla is given all the three imperial titles, and is described as the ornament of the Kamboja family. . . . The queen of the Pāla king Rājyapāla . . . was also named Bhāgyadevi, and it is, therefore, tempting to identify the king Rājyapāla of Irda plate with the Pāla king of that name. But there is no general agreement among scholars on this point. If we identify Rājyapāla of the Irda plate with the Pāla king Rājyapāla, we must hold that there was a partition of the Pāla kingdom after his death between two branches of the Pāla family. If we do not accept this identification, the most reasonable view would be to hold that Rājyapāla, an ambitious and powerful Kamboja chief, perhaps a dignitary or a high official under the Pālas, had taken advantage of the weakness of the Pāla kingdom to set up an independent principality, which ultimately comprised Western and Northern Bengal. . . . The main fact remains that the Pāla kingdom was split up during the second half of the 10th century A.D. The kingdom of Rāḍha, mentioned in the inscription of Dhaṅga (A.D. 954-1000) the Chandella King who invaded Rāḍha, therefore, probably refers to the kingdom of Nārāyanapāla and Nāyapāla comprising Western and Northern Bengal with its capital at Priyaṅgu."[4] Although the identity of Priyaṅgu has not yet been

[1] Jaragram copper-plate inscription, in Epigraphia Indica, Vol. XXIX. p. 18-28; H. K. Mahatab—op. cit. p. 147.
[2] J.A.S.B LXI. 77; Epi. Ind. XIV. 324. Gauḍa Lekhamālā. p. 91
[3] Epi. Ind. XXII, 150; XXIV, 43.
[4] R. C. Majumdar (Ed.)—History of Bengal, Vol. I. pp. 133-4.

established, it may be presumed that modern Howrah district formed a part of the Kamboja kingdom. Since the Kamboja dynasty of the Irda grant belonged to Dandabhukti[1] (which by then had become a *mandala* within Vardhamāna-*bhukti*) and because it is known that it was a town in Vardhamāna-*bhukti*, the inference may not be unreasonable that it was situated somewhere in the modern Midnapur or Howrah districts, parts of which were supposedly within the Dandabhukti-*mandala*. The Kambojas appear to have held sway over south-west Bengal at least till A.D. 1021. Whether they yielded to Pāla power or were substituted by some other local power later are matters of great uncertainty.

It appears from the Tirumalai inscription of the Chola king Rājendra Chola that between A.D. 1021 and 1023 he overthrew Dharmapāla (possibly a Kamboja king) of Tandabuṭṭi or Dandabhukti, Raṅasūra (possibly of the Sūra family of Apāra-Mandāra or Garh Mandaran of Goghat P.S. in Hooghly district) of Takkanalādam or Dakshina Rāḍha, Govindachandra of Vāgalā-desa or Vaṅga (East of the Bhagirathi), in that order, before he fought with Mahipāla, the Pāla king, and conquered Uttiralāḍam or Uttara Rāḍha. This means, by implication, that Dandabhukti, Dakshina Rāḍha and Vāṅgalā were either independent of Pāla supremacy or were semi-independent kingdoms at the time of the Chola invasion.[2] It is, however, not certain whether the modern Howrah district belonged to the Kambojas of Dandabhukti or the Sūras of Apāra-Mandāra or whether parts of it fell within Dandabhukti while other parts were included in Dakshina Rāḍha.

The Pālas ruled the distant parts of their domain through local feudatory chiefs and allies who began to assert their independence with the weakening of the central Pāla power. Rāmapāla lost his kingdom to one such chief Bhima, a Kaibartta, who rose in revolt. The detailed list of independent or semi-independent rulers who helped Rāmapāla regain his kingdom, figuring in the *Rāmacharita* of Sandhyākaranandi and annotated by a near contemporary commentator, is of great historical importance providing an interesting picture of the political dismemberment of Bengal caused by the decline of the Pāla power.[3] This list includes, among others, the names of Lakshmisūra, ruler of Apāra-Mandāra, and Jayasiṁha, king of Dandabhukti.[4] After regaining his kingdom Rāmapāla led his victorious army to Orissa.

Taking advantage of the weakness of Kumārapāla, son of Rāma-

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[1] ibid. p. 32.

[2] K. A. Nilkantha Sastri—The Çolas. 347 ff; R. C. Majumdar—History of Bengal, Vol. I.

[3] Radhagovinda Basak (Tr. & Ed.)—*Gauḍakavi Sandhyākaranandi Birachita Rāmacharita* (in Bengali). Calcutta (2nd edn.), 1331 B.S.; History of Bengal. Vol. I. pp. 156-7.

[4] Radhagovinda Basak—loc. cit.; R. C. Majumdar (Ed.)—loc. cit.

pāla, who ascended the throne in A.D. 1120, Anantavarmana Choḍagaṅga of Orissa attacked Rāḍha sometime before A.D. 1135 "The Kenduāpāṭnā, Pānjābi Maṭh and Saṅkarānanda Maṭh copper-plate inscriptions reveal that Choḍagaṅga fought the king of Mandāra on the banks of the Ganges" and defeated him. "There is no doubt that a large portion of southern Bengal remained under the king of Orissa."[1] Tradition current in Howrah district seems to corroborate this supposition.

Pāla find

Whether or not the Pālas held direct political sway over all parts of Bengal from the middle of the eighth to the middle of the twelfth century, they were nonetheless able to create with their active encouragement an all-Bengal cultural milieu, which found expression in the Pāla idiom in arts, notably in sculptures. During that long period, irrespective of whether a particular piece of sculpture or painting was created within the territorial limits of the Kambojas of West and North Bengal or of the Chandras of East Bengal it would be in the Pāla style.

Two sites in particular in the Howrah district, namely Harinarayanpur-Mugkalyan (Bagnan P.S.) and Bachhari-Khajuri (Syampur P.S.) have yielded a large number of stone sculptures ascribable, on stylistic grounds, to the Pāla period. The distance from Bachhari to Khajuri is over a mile where the flat topography of the country is broken by sporadic mounds from Damdama in Bachhari to Gharpota in Khajuri. Casual digging of earth in this area for excavating tanks or for collecting clay for brick-making have yielded cast metal coins, terracotta figurines, pottery from lower levels and stone sculptures, fragments of earthen utensils, brick walls and stone-built architectural members such as door jambs and lintels from relatively higher levels. The Harinarayanpur-Mugkalyan site has also yielded a large number of sculptures and parts of stone-built edifices. Most of the recognizable and stylistically datable sculptures in the collection of the Anandaniketan Kristisala museum at Nabasan and the Sarat Smriti Sangrahasala at Panitras as also those lying *in situ* are of Vaishnavite origin. They include several Vasudeva-Vishnu icons, small Vishnu-*pattas* usually used for domestic divine services and a broken image of Chamunda found from the village of Mankur in Bagnan P.S. Some of them are in early Pāla idiom while most are in fully developed Pāla style of the tenth and eleventh centuries. Other sculptures found from these sites are of distinctly later periods stylistically attributable to the late twelfth and thirteenth centuries. So far neither of the sites has been archaeologically explored nor have the finds been properly studied, categorized and dated.

Besides the finds from these two sites, specimens of Pāla sculptures are in existence in many villages of the southern and western police

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[1] Harekrishna Mahatab—History of Orissa, Vol. I. Cuttack. pp. 200-01.

stations of the district. Among them a stone plaque at the shrine of Melaichandi at Amta and a headless stone image of Vishnu, now worshipped as Panchananda, at the bazar area of the same village are worthy of notice. In the household shrine of the Mukherjees of Pichhaldaha within Amta police station there is a headless stone image, perhaps of Nrisiṁha, now worshipped as Barahi Chandi, which also conforms to the Pāla style. In the outer compound of the Mukherjees' house there is a miniature stone shrine with carvings of *Aṅga-sikharas*, perhaps from an extinct temple. In the village of Khalor within Bagnan P.S. there is a shrine of Dharma which contains a small stone image of Vishnu in the late Pāla style. It is now worshipped as Dharma. The stone door steps and stilts of the Madangopal temple of Mellok (Bagnan P.S.) evidently come from an earlier temple, presumably built in the Pāla period. An image of Vishnu lying uncared for in the front porch of the temple and another similar icon in private possession in the adjoining village may also be ascribed to the same period. In a number of temples of later origin in the Syampur thana, Vaishnavite and occasional Sakta images occur which may be attributed to the age of the Pālas and the Senas.

These sculptures throw interesting sidelight on contemporary social history. Although tolerant to other religions, the Pālas were devout Mahāyāni Buddhists and it is curious in that context that no Buddhist icons have so far been discovered from anywhere in the district. This may be an indirect evidence tending to prove that the region was perhaps outside the direct political control of the Pālas. Vaishnavism with the worship of Vasudeva-Vishnu as the major cult also seems to have been the principal religious faith of the area.

Position of the district during the Sena period

It is now generally accepted that the Karnāṭaka-Kshatriya Sena family migrated to Bengal and one of their ancestors took up service under the Pālas. This ancestor, through his acumen and integrity, earned for himself and his family a principality where he began to rule as a vassal of the Pāla sovereign.[1] Sāmantasena, the grandfather of Vijayasena and father of Hemantasena, had his headquarters somewhere in Birbhum district, the boundaries of which possibly touched the Bhagirathi in the region now in Murshidabad or Burdwan district. Taking advantage of the weakening of the Pāla power under Kumārapāla and his son Madanapāla, Vijayasena led a number of successful expeditions against the loyal vassals of the Pālas, other neighbouring kings and against the Pālas themselves and eventually captured the sovereign power in Bengal. The Deopara inscription records the names of kings over whom Vijayasena scored victories. From several other inscriptions we are able to infer who were the friends and allies of the Senas. The Barrackpur copper-plate inscription, for instance, records that Vijayasena married one Vilāsadevi,

[1] Niharranjan Ray—*Bāṅgāleer Itihās, Ādi-Parva* (in Bengali). Calcutta (Second reprint), 1359 B.S. pp. 497-500.

a princess of the Sūra family, thereby cementing an alliance with Apāra-Mandāra. Whether Vijayasena had direct control over all the tracts he conquered or left some of it to local feudatory chiefs is not definitely known. His relations with the Sūras, who had been ruling over considerable portions of the present-day Hooghly district and its adjoining areas, is also a matter of conjecture. The Naihati copper-plate inscription of Vallālasena, found in the village of Naihati in Katwa subdivision of Burdwan district, reveals that Vardhamāna-*bhukti* was an important division of the Sena kingdom. The Govindapur grant of Lakshmanasena, found in the village of Govindapur in the district of 24-Parganas, tells us that Vardhamāna-*bhukti* extended up to the confluence of the Ganges (Bhagirathi) with the sea and was divided into *vishayas*, *mandalas* (?), *khaṭikas*, *chaturakas* and *grāmas* and that a certain Viddarasasan *grāma* was situated within Vetadda-*chaturaka* which was a part of Paschima-*khaṭika* in Vardhamāna-*bhukti*. Several historians have identified Vetadda with Betor, now in the Sibpur police station of Howrah district.[1] According to Kalidas Dutta,[2] Vetadda-*chaturaka* extended from the parting point of the Saraswati and the Bhagirathi in the north (near Tribeni) to the confluence of the Bhagarathi with the Bay of Bengal in the south. The eastern boundary of this *chaturaka* was formed by the Bhagirathi up to Calcutta and then along the flow of the Adiganga up to Kakadwip (which was the mainstream of the Bhagirathi till about the 16th century) while its western boundary lay along the course of the Saraswati up to Betor and then along the course of the Bhagirathi up to its confluence with the sea. This tract now includes the whole of the eastern part of the Howrah district, the central and western portions of which were also included in the Vardhamāna-*bhukti*, but to which *vishaya*, *mandala*, *vithi* or *chaturaka* they belonged are not known. In the *Vallāla-charita* there is a list of territories comprising the kingdom of Vallālasena (A. D. 1158-79) which included Vaṅga, Rāḍha (presumably Uttara-Rāḍha, Dakshina-Rāḍha and Paschima Khaṭika), Barendri, Mithila and Bagri (the Bagri Pargana of Midnapur district). There is little doubt that Lakshmanasena (A.D. 1179-1205) ruled over the entire tract now forming the Howrah district. Dhoyi, the court poet of Lakshmanasena, gives in his *Pavanadutam* a graphic account of the country on either side of the Ganges (Bhagirathi) and states that a city on this river called Vijayapura was his capital the exact identification of which is difficult since in the course of the last 800 years the Bhagirathi

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[1] Nalinikanta Bhattasali—*Lakshmanasener Nabāviskrita Saktipur Sāsan Ō Prāchin Baṅger Bhaugōlik Bivāg* (in Bengali), in *Sāhitya Parishad Patrikā*, Calcutta, 1339 B.S.; Jogesh Chandra Roy Vidyanidhi—*Prāchin Baṅger Bivāg* (in Bengali), in *Sāhitya Parishad Patrikā*, Calcutta, 1340 B.S.; Kalidas Dutta—*Paundravardhana Ō Vardhamāna-bhukti* (in Bengali), *Sāhitya Parishad Patrikā*, Calcutta, 1341 B.S.

[2] Kalidas Dutta—loc. cit.

has changed its course considerably. Some say that it was on the site of present Nabadwip in Nadia district.

With the flight of Lakshmanasena to East Bengal in 1201, the sovereign power in Bengal passed on to the Turko-Afghans. But it took the usurpers more than a century to finally annex the territory now included in Howrah district. During this interregnum who governed this region is not definitely known. Probably the Orissan kings held their sway here through local feudatory chiefs who might have enjoyed some measure of independence from time to time.

MEDIEVAL PERIOD

It may be assumed that this portion of the southern Rāḍha country was occupied by the Muslim rulers following the capture of Lakshmanasena's capital by Bakhtiyar Khalji in A.D. 1201, and the subsequent extension of Muslim hegemony over western Bengal. This would seem to tally with the evidence that the Gaṅga Kings of Orissa extended their sway over the region now approximately covered by the Uluberia subdivision of the district, while the territory forming the present Howrah or Sadar subdivision remained in Rāḍha. As O'Malley and Chakravarti have pointed out: "... the Gangas conquered and annexed Mandaran, and with it at least a part of this district. Moreover, in the palm-leaf chronicles of the Jagannath temple, King Anangabhimadeva (*circa* A.D.) 1300 is quoted as boasting that he extended the northern frontier of his kingdom from the river Kansbans (near Bhadrakh in the Balasore district) to the river Danei-budha. The latter is apparently the old Damodar which as late as the 17th century was called Jan Pedro, *d* and *j* being interchangeable in the Oriya language. If credence may be given to these records, the Ganga kingdom extended up to the old Damodar and included the Uluberia subdivision, leaving the Howrah subdivision still in Rāḍha."[1]

By the end of the 13th century Muslim sway was consolidated over the Sātgāon (Saptagram) region and was extended as far south as the mouth of the Damodar. But the fact that the seats of Muslim power in western Bengal were located at such northerly cities as Lakhnauti or Pandua, coupled with the negative evidence of the absence of any early Muslim remains in the district tends to indicate that the Sultans of Bengal, prior to Husain Shah (1494-1520), were not entirely successful in administering these outlying regions of their southern territories. "The real rule of the Muhammedans", it has been observed in the old District Gazetteer of Howrah, "probably began in the time of Husain Shah, who consolidated his power over Bengal and Bihar, and whose generals invaded Assam, Orissa and Chittagong."[2] But this was by no means a stable arrangement, for a few decades later a large tract of land which must have comprised a substantial

[1] L. S. S. O'Malley & M. Chakravarti—op. cit. pp. 17-8.
[2] loc. cit.

portion of the present district of Howrah again fell into the hands of the kings of Orissa and there is evidence to show that the last Hindu king of Orissa, Mukundadeva Hari Chandan, succeeded in encroaching into Bengal as far north as Tribeni. In 1568, however, there was again a reversal of fortunes when Sulaiman Karrāni drove back the Orissans into their own territory and finally conquered Orissa itself. Presumably, a great portion of the district was regrouped to form a part of a new *sarkār* called Sulaimānābād after Sulaiman Karrāni.[1]

The administrative set-up in this region during the 16th century is best described in the words of O'Malley and Chakravarti: "On the defeat and death of his son Dāud Kararāni in 1576 A.D., Bengal formally became a part of Ākbar's empire. In 1582 A.D. Ṭodar Mal drew up his famous rent-roll, which so far as the *subāh* of Bengal was concerned merely accepted the state of things as it existed during Afghan rule from the reign of Sher Shāh to that of Sulaiman Kararāni. From this rent-roll the district appears to have been distributed between three *sarkārs*, Sātgāon, Sulaimānābad and Madāran, and the following *mahals* can still be traced:—in Sātgāon (1) Purāh (the modern Boro, in which lies Howrah town), (2) Bāliā, (3) Muzaffarpur, (4) Kharar (the modern Khalor); in Sulaimānābād, (5) Basandhari, (6) Bhosāṭ (the modern Bhursut), (7) Dharsa; and in Madāran, (8) the great *mahal* of Mandalghaṭ. Judging from the location of these *mahals*, the original *sarkārs* were Sātgāon and Madāran, which were separated by the old Damodar; and the *sarkār* Sulaimānābād was made up of portions of them, e.g. in this district Bāliā, Basandhari and Dharsa were detached from Sātgāon, and Bhosāṭ on the west of the Damodar from Madāran. *Sarkār* Sātgāon had a large general revenue from dues on ports and *hāṭs*, and a small one from vegetable markets and timber yards, of which a portion would have been realized from the area now comprised in the district of Howrah."[2]

It is worth mentioning that while our estimate of the general course of events in this part of the country during the medieval period is somewhat obscure, certain references to specific places, now included within the district, are to be found in contemporary Bengali literature as also in the accounts of the early European travellers in Bengal. The *Chaitanya Mangal* giving details of the route followed by Sri Chaitanya on his way to Puri mentions that he crossed the Bhagirathi at Santipur and arrived at Ambika Kalna in the district of Burdwan from where he travelled south keeping the Bhagirathi to his left and reached Kulingram, another village in the same district. Proceeding further, he halted at Sheakhala, a few miles inside Hooghly district from the Howrah-Hooghly border, before crossing the

[1] loc. cit.
[2] ibid. pp. 18-9.

Damodar. The *Chaitanya-Charitāmrita* states that he passed through Pichhalda on his way to Tāmralipta (modern Tamluk) on the other side of the Rupnarayan. Pichhalda appears to have been one of the frontier outposts of the Sultans of Bengal in the south-west in addition to the stronghold at Mandaran. While it has been held by some that this place lay beside the Haldi (or the Kangsabati) river near its mouth and was in the Midnapur district, the generally accepted view identifies it with the village Pichhalda in Syampur police station of Howrah district about three miles north-west of the confluence of the Bhagirathi and the Rupnarayan. A few other local details may also be gathered from the *Manasā-Mangal* of Bipradāsa Piplāi written in A.D. 1495 and the old maps of Gastaldi and De Barros. Bipradāsa described the voyage of a merchant called Chānd from Burdwan to the sea. Chānd went by Ariadaha on the east bank of the Bhagirathi, passed by Calcutta, and at Betor worshipped its presiding goddess Betāi Chandi. Ghusuri, a place not mentioned in any other old work, is now the northernmost portion of Howrah city of which Betor is also a part south of Sibpur. In the old maps we find two more places called Pisacoly (De Barros) and Picalda (Gastaldi), or Pisolta (De Barros). Pisacoly, which is shown as a place between the mouths of the Damodar and the Rupnarayan, has not yet been identified, and does not appear in maps published in the second half of the 17th century but Pisolta has been identified with the modern village of Pichhaldaha which was then a trade centre of some importance and where boats used to cross the Rupnarayan.

In the old District Gazetteer of Howrah there is a description of places in the district as found in the accounts of early European travellers in Bengal which may be usefully quoted here in its full length. "The first mention of any place in the district by a European writer occurs in the journal of the Venetian Cesare Federici, who left an interesting account of Bator. Cesare Federici visited the place about 1578 and described it as follows:—'A good tide's rowing before you come to Sātgāon you shall have a place which is called Buttor, and from thence upwards the river is very shallow, and little water. Every year at Buttor they make and unmake a village with houses and shops made of straw, and with all things necessary to their uses, and this village standeth as long as the ships ride there, and till they depart for the Indies; and when they are departed, every man goeth to his plot of houses and then setteth fire on them, which made me to marvel. For, as I passed up to Satagan, I saw this village standing with a great number of people, with the infinite number of ships and bazars, and at my return coming down with my captain of the last ship, for whom I tarried, I was amazed to see such a place so soon razed and burnt, and nothing left but the sign of the burnt houses.'

"From this account it is clear that Bator was a rendezvous for

trading ships unable to proceed higher up the shallow reaches of the river, and that what is now called a *hat* or periodical market was held there. The centre of this trade was Satgaon. . . .As European trade in Bengal expanded, it led to an extension of cultivation and to the settlement of weavers and other artisans along the river bank. . . . The large increase in the river and sea-going traffic also attracted pirates, particularly Arakanese and Portuguese half-castes. These pirates infested the estuary of the Hooghly, but gradually became more daring, and sailed higher up. To check their raids, the Musalman Government built, apparently about 1666, a fort on the west bank known as Tanna Fort.[1] It is shown in Valentijn's and subsequent maps, and is thus described in the diary of the Agent, Streynsham Master, under the date 30th November 1676:— 'Tannay is distant from Hooghly about forty miles by water and twenty miles by land. There stands an old fort of mud walls, which was built to prevent the incursions of the Arracanese, for it seems about ten or twelve years since they were so bold that none durst inhabit lower down the river than this place, Arracanese usually taking the people of the shore to sell them at Pipley.' This fort was frequently mentioned in the European accounts of the 17th and 18th centuries, and played an important part in the early struggles of the English."[2]

No account of the history of the district during the medieval period is, however, complete without a mention of the independent principality of Bhurisreshṭha or Bhursuṭ[3] and the part played by its rulers in the history of Bengal. At the time of the clash between Sulaiman Karrāni and Mukundadeva of Orissa in A.D. 1564-65 resulting in the capture of Sātgāon by the Orissan chief, the independent ruler of Bhurisreshṭha had aligned himself with Mukundadeva against the Sultan of Bengal. It is said that the might of Rājivlochan (better known later by his popular name 'Kālāpāhār') was mainly responsible for frustrating all attempts by Sulaiman Karrāni to regain Sātgāon. With the restoration of peace after the secession of Sātgāon to the King of Orissa by Sulaiman Karrāni, Rājivlochan was invited by the Sultan of Bengal to his court at Gaur. The story goes that Rājivlochan and the Sultan's daughter were attracted to each other and this led to the subsequent marriage between the two and Rājivlochan's conversion to Islam. The popular stories about Kālāpāhār's iconoclastic onslaught on Hindu temples and deities is too well known but a point of interest noted by a local historian

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[1] The present name of the place is Thana Makua which is the extreme north-eastern mouza (J.L. No. 40) of Sankrail police station. It lies on the right bank of the Bhagirathi immediately west of the Sibpur Botanical Gardens.

[2] L. S. S. O'Malley & M. Chakravarti—op. cit. pp. 19-21.

[3] Although it is impossible now to demarcate exactly the territories falling within this principality, it appears most likely that they comprised the north-western parts of the present Howrah district and the south-western portions of the Serampore subdivision of the neighbouring Hooghly district.

is that he spared the Bhurisreshtha territory from his destructive raids.[1]

Another local historian has, however, raised serious objections about the authenticity of the stories about 'Kālāpāhār' and his connexions with the Bhurisreshtha ruling family. He has also cast doubts about the identity of Rāni Bhavasaṅkari, the popular heroine of this family who was supposed to have received the title of 'Rāy Bāghini' from the Emperor Ākbar for her exploits of valour against the Pathan armies of Osman Khan, the general of Qutlu Khan. This author has examined a host of primary source materials, including authentic contemporary accounts, inscriptions relating to grants of lands, inscriptions in temples and grant-deeds preserved as old records, and has come to the conclusion that most of the previously accepted stories about 'Rāy Bāghini' are untenable.[2] He is of the firm opinion that there is no concrete evidence to indicate that 'Rāy Bāghini' and Rāni Bhavasaṅkari, believed to be the wife of Rājā Rudranārāyan who is said to have ruled this territory ably as a widow and expelled the Pathan troops from her domain, were the same person. It has been pointed out in the latter of the two articles cited above that no contemporary chronicles refer to this valiant lady nor is there any epigraphical evidence other than a solitary temple inscription (which is none too clear and conclusive) which goes to show that all the claims made in favour of the widow of Rudranārāyan are in any way authentic. Similarly, about 'Kālāpāhār' too, there is no clear evidence to identify him with Rājivlochan of Bhurisreshtha; in fact, the author goes further and says that neither the dating of 'Kālāpāhār' nor his ancestry and place of birth can be determined with any degree of accuracy and that there is a strong claim that he hailed from northern Bengal and lived during the time of Sultan Barbak Shah.[3]

It appears that the Brahmin ruling family of Bhurisreshtha was founded by one Chaturānan Mahāneogi who dislodged the Bagdi rājās who held sway over this region previously and captured the *parganā*. In the *Āin-i-Ākbari*, *mahal* Bhursut is mentioned as forming a part of *sarkār* Sulaimānābād, and paying a land revenue of 19,68,990 *dāms*.[4] He was succeeded by two able rulers, Rājā Krishna Rāy and Rājā Pratāpnārāyan, but after them the family gradually declined in importance.[5]

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[1] Bidhubhushan Bhattacharyya—*Hooghly Ō Howrār Itihās* (in Bengali), Vol. II. Calcutta, 1335 B.S. pp 49-51.

[2] Dinesh Chandra Bhattacharyya—(1) '*Bhurshuter Brāhman Rājbaṁsa*' in *Prabāsi*: *Bhādra*, 1359 B.S. and (2) '*Rāy Bāghini Ō Kālāpāhār*' in *Prabāsi*. *Paush*, 1361 B.S.

[3] *vide* article No. 2 cited in the preceding f.n.

[4] *vide* article No. 1 of the same f.n.

[5] For a fuller account of the Bhurisreshtha rulers and its off-shoots see articles on Dihi Bhursut, Garh Bhabanipur and Penro in Chapter XVI on Places of Interest.

As for the main course of events in the history of the district during the closing stages of the Mughal rule, the old District Gazetteer gives a full and connected account, the relevant portions of which are quoted below:

"In December 1686 the rupture with the Viceroy Shaista Khan led to the retreat of the British from Hooghly under Job Charnock. The refugees found temporary shelter at Sutanuti, the present site of Calcutta, but the country was up in arms and a large army was advancing against them. It was accordingly decided to fall back on Hijili further down the river. On the way they stormed and took the fort of Tanna. . . .Not satisfied with this, they plundered and destroyed everything between Tanna and Hijili including several granaries and salt depots belonging to the Nawab. They also seized and carried off a number of Mughal vessels, which they met in the river, and, sending several of their own ships to Balasore, burned and destroyed about forty more native merchant vessels. The war was concluded in August 1687 by a treaty under which the British were allowed to move up from Hijili and settle on a tract of land near Uluberia, to erect magazines and construct a dock for shipping; but they were forbidden to go beyond the Tanna forts and had to restore all the ships they had seized. . . .Charnock and his little band now moved on to Uluberia (on the 17th June), but after a short time went to Little Tanna, from which, with the permission of the Mughal authorities, they returned to Sutanuti. At first Charnock had recommended that the British should make their headquarters at Uluberia, but afterwards the Bengal Council changed their minds and reported in favour of Sutanuti, as we learn from a subsequent letter referring to:—'Our General Letter by the *Beaufort*, and Our Diaries of that Yeare wherein we have layd downe Our reasons for the altering our opinion about Ulubarreah and pitching on Chuttanuttee as the best and fittest up the River on the Maine, as we have since experienced, and likewise been sattisfyed that Ulubarreah was misrepresented to us by those sent to survey it.' This letter was written from Madras where the Bengal Council had been forced to retire. The subsequent adventures of Charnock and his followers took place outside this district, and it will be sufficient to say that at length on 24th August 1690 Charnock arrived for the third time at Sutanuti and founded the present city of Calcutta. To those curious about such things it is a quaint reflection that Uluberia, now a quiet provincial town, might have been the capital of India.

"Six years later the existence of the infant settlement was threatened by the rebellion of Subha Singh. One party of the insurgents laid siege to Fort Tanna, but the British, at the request of the *Faujdar* of Hooghly, sent a vessel with some guns to assist the garrison, and the insurgents were compelled to retreat. For some years after this district had peace, and the foundation of Calcutta assisted its develop-

ment. Bator indeed declined, most of its trade being transferred to the other side of the river; but new villages sprung up, docks were opened for repairing ships, while gardens and villas were built in Howrah city as suburban retreats. Captain Alexander Hamilton, who visited Calcutta about 1706, thus described Howrah:—'On the other side of the River are Docks made for repairing and fitting their ships' Bottoms, and a pretty good Garden belonging to the Armenians, that had been a better place to have built their Fort and Town for many Reasons.'...

"On the accession of the Emperor Farrukhsiyar, the Bengal Council decided to send a deputation to Delhi with a petition for the renewal of their *farmans*. In this petition they applied for a lease of additional villages, five on the west side and thirty-three on the east side of the Hooghly. The list of villages is given in the Consultation Book of the Council under the date May 4th, 1714, and mentions 'Salica' (Salkhia), 'Harirah' (Howrah), 'Cassundeah' (Kasundi), 'Ramkrissnapur' and 'Batter' (Bator), all in *parganas* 'Borrow' and 'Paican' with an annual rent of Rs. 1,450. The deputation under John Surman and Khoja Sarhad Armenian did not start till after March 1715, and after a delay of 2½ years, Mr. Surman came back with 33 *farmans* and *hasbul-hukums*. The deputation was successful in getting orders about the *talukdari* of all the villages applied for, but could not secure a lease of the five Howrah villages, because the landlords were prevented by the Nawab from parting with their lands on any terms.

"During the next 12 years the rent-roll was twice revised, first in 1722 by Jafar Khan *alias* Murshid Kuli Khan and again in 1728 by his son-in-law Shuja-ud-din. During these revisions the zamindari of Burdwan received large additions, the whole of Uluberia and a large part of the Howrah subdivision being included in it. Furthermore a strip of land on the west bank of the river from Hooghly down to Howrah was separated and raised into a distinct zamindari called Muhammad Aminpur. In this way the lands of Howrah district, excepting certain *kharija mahals*, came to be under two Hindu zamindaries, Burdwan and Muhammad Aminpur, as is shown in Rennell's Atlas (Plates VII and IX).

"In 1741-42 A.D., the Maratha cavalry under Bhaskar Pandit swept over Western Bengal, and forced Ali Vardi Khan to retire precipitately from Burdwan to Katwa. The whole tract from Akbarnagar (Rajmahal) to Midnapore and Jaleswar came, we are told, into the possession of the Marathas. Mir Habib made himself master of Hooghly, and the Marathas led by him overran the lands on the western side of the river and are said to have seized the Tanna Fort. The war continued till 1751, and the land suffered frequently from the incursions of the Maratha cavalry, and also from the bands of decoits that sprung up amid the disorganization of administration.

Fort Tanna again came into prominence in 1756, when Siraj-ud-daula advanced upon Calcutta. The British commenced hostilities by an attack on the fort and . . . the garrison, consisting of about fifty of the Nawab's troops, evacuated the place. A small detachment of Europeans and lascars then landed and took possession, spiking some of the guns and throwing the remainder into the river. Next day 2,000 men arrived from Hooghly, drove the detachment to their boats and opened a heavy fire on the vessels from their matchlocks and two field-pieces which they mounted on the walls. The ships attempted to return the fire, but their light guns made no impression on the walls of the fort, and though a reinforcement of 30 men was sent from Calcutta, they were obliged to return, having failed in their attempt. The failure of this attempt subsequently cost the British dear. After the capture of Calcutta . . . the survivors in attempting to escape down the river were driven back by the guns mounted on the fort, and a sloop and a snow were forced ashore. Four days later they were joined by three vessels from Bombay and managed to pass the fort safely with the loss of only two lascars.

"The capture of the fort was one of the first successes of the avenging force under Clive and Admiral Watson. As soon as he heard of their approach, the Nawab had the fort put in order, commenced building another called Aligarh on the opposite bank, and had two ships loaded with bricks ready to be sunk in the channel between them. A sloop coming up in advance of the fleet prevented the sinking of these two ships, and on the 1st January the forts were evacuated without a shot being fired."[1]

MODERN PERIOD

The real development and importance of the town of Howrah and its neighbourhood began with the arrival of the English merchants who mainly used the channel of the Bhagirathi for the movement of their merchandise and had, therefore, to anchor at suitable places along the banks of the river. Ever since the establishment of the East India Company's factory at Hooghly, its trade in Bengal began to grow. But the Company met with many obstacles by way of official interferences, malpractices by local authorities, absence of security (as a result of the depredations of pirates) etc. It is in this context that the struggle between Shaista Khan, the then Governor of Bengal, and the East India Company has to be viewed. When at the end of 1686 the Nawab's forces captured Hooghly and burned down the English factory there, Job Charnock moved down the river to Sutānaṭi. During the first half of the following year Charnock and his men made a stand at Hijli and fought their way back towards the north. "From Hijili, Charnock and his party went up the river to Uluberia where they remained for three months, waiting for some effect to be given to

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 21-4.

the understanding entered into with Abdu-s-Samad (general of Shaista Khan—Ed.)."[1] Charnock then returned to Sutānaṭi but had to fall back again and made a temporary retreat from Bengal. The next reference to a place within the district occurs in A.D. 1690 when the English and the Danish commercial vessels were said to have met near the trading centre of Betor for exchange of goods.[2]

When in 1717 the Company acquired the zemindari of the three villages—Dihi Kalikātā, Sutānuṭi, and Govindapur (the nucleus of the present city of Calcutta) according to the terms of a *farman* of the Emperor Farruk Siyar, it could not extend the limits of its possession either to the north or the south or across the river owing to the uncompromising opposition of Murshid Quli Khan. In the words of Firminger: "Had the English been able to purchase the towns, their zamindari would have extended from the boundaries of the Dutch factory or Barnagore in the north to Kalpi in the south, Howrah (Haurah), Kasundiyah, Ramkrishnapur, and Betor. But beneath Murshid Kuli Khan's scowling countenance, what native would dare to sell his zamindari rights ?"[3] The larger portion of the Howrah district was, however, ceded along with Burdwan to the East India Company in 1760. The history of the subsequent formation of the district as an administrative unit has been dealt with in Chapter I and need not be repeated here.

As for the general course of political events during this time, we do not have sufficient details about this region, except for some occasional reference to the Maratha raids and the incursions of Maghs and other bands of pirates. In 1743 the Marathas, joined by the French, held the territory west of the Bhagirathi, including the present district of Howrah. Besides the Marathas, ordinary bandits also infested the country and caused great anxiety to the early English settlers. It is possible that for this reason the fort at Thana Makua was mounted with guns commanding the narrow channel of the river guarded by another fort on the opposite bank now known as Garden Reach or Metiabruz. The Magh pirates engaged in slave-trading (a practice encouraged by the indigenous gentry, the Portuguese and the Dutch) carried on their depredations along the river which reached its peak between 1760 and 1770. "During the year 1770 A.D., they came close to Howrah, and the alarm was so great that it was found absolutely necessary for the sake of protection, to run a chain across the river Hooghly at Mukwa Tanna fort, near Holwel place, which was on the site of the house occupied by the Superintendent of the Botanical Gardens."[4]

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[1] W. K. Firminger—Historical Introduction to the Bengal Portion of the Fifth Report (Indian Studies. Past and Present, reprint). Calcutta, 1962. p. 75.

[2] C. N Banerjei—An Account of Howrah, Past and Present. Calcutta, 1870. p. 18.

[3] W K. Firminger—op. cit. p. 89.

[4] C. N. Banerjei—op. cit. p. 19.

In 1780 the Marathas visited the neighbourhood of Howrah again and captured the Thana fort. They established themselves at Uttarpara (adjoining Baly) for some time. There is enough evidence to show that in spite of the growing trade along the Bhagirathi, Howrah continued to be a backward tract during the 18th century.

The importance of Howrah in the late 18th and the 19th centuries was mainly due to the commercial character of the region. The district still largely retains that tradition since in the 20th century its development as a port and also as a centre of manufacturing industries has been phenomenal. C. N. Banerjei has given a comprehensive account of the history of the commercial activities of the East India Company in the 18th century as also of the various private commercial concerns in the 19th century within the district. The merchandise taken up by him for discussion is salt—a Company's monopoly—which was one of the chief items of its commercial enterprise.

"On the acquisition of the Dewanny by the Company, the revenue arising from the salt trade was set aside exclusively for paying their European servants. In 1766 A.D., the price at which salt was to be sold was fixed. In 1772 A.D., salt everywhere in Bengal was placed on the same footing, and manufactured for the Company. The manufactories were farmed for five years but within a year's time the farmer had the disposal of the salt manufactured by him. In 1780 A.D. the system was changed. European servants had wages given them in lieu of the profits with a commission on the profits, and in the regulations of 1793 A.D., this system of monopoly was continued, and was only given up in 1862. In Howrah however no salt has even been manufactured. It is difficult to ascertain the exact date when the golahs in Howrah, which have been always looked upon as bonded warehouses for imported salt, came into existence. The time must have been between 1793 and 1801 A.D., for in the latter year we find that the superintendence of the golah here was placed under the control of the Western Salt Chowkey. In 1819 the supervision passed into the hands of the Board of Customs, Salt and Opium which had just then been created, and the Superintendent of the Western Salt Chowkey was placed in subordination to this Board. In 1826 it was found necessary to create an intermediate class of officers called Salt Agents, and the Midnapore and Hidgelee Salt Agents had authority here. . . .The golahs were originally located at Howrah, but when the Railway Co., opened out their premises, the golahs were removed to Sulkea. Here they did not continue for a long time as the buildings were burnt down. New buildings were erected on the site opposite. Additional golahs for want of space had to be put up in Goosery in 1861 and in Bandah Ghat, and in Seebpore. . . .

"As has been noticed above, the Howrah Golahs were always considered bonded warehouses. Salt manufactured at Tumlook

and in the Balasore, Pooree, and central Cuttuck Agencies, is brought down here on account of Government by contractors. . . .At these golahs salt is not only received but also delivered, the salt being brought from those Agencies which are the least accessible to merchants. Salt was also imported from the Coromandel coast for storage and sale. The practice was discontinued in 1845-46, but renewed in 1852-53. In the interval Kurkutch salt was indented for from the Chilka Lake. . . . An important epoch in the history of the salt golahs was the year 1855-56: for in this year, salt commenced passing into the interior by rail. Salt from Scinde was brought to Sulkea in 1858-59. In 1863 . . . a considerable quantity of salt was brought up from Madras for sale. The cyclone of 1864 did considerable damage to the Sulkea and Goosery golahs. After the monopoly of salt was given up by Government, Howrah was excluded from chowkey limits and placed in 1864 directly under the Customs Department Calcutta. A railway siding was laid down from the Howrah terminus of the Railway Co. to the Sulkea salt golahs in November 1864, to facilitate the transport of salt by rail, but had to be abandoned in January 1865. . . . The Goosery golahs were never very popular owing to the river bank having silted up for some time previous to 1865-66. . . . Up to August 1868 deliveries of bonded salt were presided over by a class of men called Kyalls and Tippanovisses, but as they were generally corrupt, responsible Customs Officers were placed in charge of deliveries. . . . The salt golahs now in Howrah, at Sulkea, Seebpore, and Goosery are not only self-supporting, but a source of revenue to Government. The golahs are repaired quadrennially. The other salt chowkeys, though not in Howrah but which are subordinate to its jurisdiction, are in Bhuddessure, Mundul ghat, and Seebgunge."[1]

Of the old-time industries in the district, the most important were cotton textile weaving and silk spinning.[2] "Weaving", said O'Malley and Chakravarti in the old District Gazetteer of Howrah, was once an important industry in this district. As early as 1580, Bator was a local trade centre subsidiary to the great market of Satgaon, which according to Caesare Federici, who visited it in that year, was a place where merchants sold 'cloth of Bombast of diverse sortes.' In 1758 the East India Company is said to have issued orders that weavers were to be encouraged to form settlements on this side of the Hooghly, so as to meet the demand for cloth for its trade. The trade in handmade cotton fabrics flourished in the 18th century, large exports being sent to England, but from 1800 onwards the heavy duties levied on Indian cotton cloths in England and subsequently the large imports of Lancashire machine-made piece-goods dealt a fatal blow to the

[1] Ibid. pp. 69-72. For more information about the trade of the district in the 19th century, please see Chapter VI on Banking, Trade & Commerce.

[2] Please see chapter on Industries as well.

industry. . . . With the decline in the demand for the produce of their looms, the weavers gradually took to other occupations in the villages, chiefly to cultivation, while in the towns a number found employment in the cotton mills started in Ghusuri and elsewhere.

"Weaving is the hereditary occupation of two Hindu castes, Tantis and Jugis, and of the Musalman Jolahas. . . . The census of 1901 showed the number of males among the weaving classes as Jugis 2,065, Tantis 7,790 and Jolahas 4,570, in all 14,425. . . . The chief centres of cotton weaving were in thana Dumjor (Domjur). in thana Jagatballabhpur, west of Kana Nadi, and in thanas Amta and Bagnan. The village Nabosan in thana Jagatballabhpur was particularly well-known for the fine cloth it produced. Since 1906 the *Swadesi* movement has helped to resuscitate hand-loom weaving."[1]

About silk spinning and silk rearing, the joint authors of the old Gazetteer observed: "Silk rearing is a local industry which can be traced to the middle of the 18th century, when the cultivation of domesticated silkworms for the silk trade of the East India Company was carried on in parts of the district. This cultivation was kept up in the palmy days of the Company's silk trade (1790 to 1835), and, even after the withdrawal of the Company from the trade, until 1875. Since then it has been rapidly dying out and only a vestige of it now remains, most of those who engaged in it having taken to agriculture."[2]

The propagation of the Christian faith and allied activities of various Christian missions constitute an important aspect of the history of the district in the 19th century of which C. N. Banerjei gives the following account: "The Baptist Missionaries of Serampore . . . commenced their operations as early as 1793 A.D., by occasional preachings. . . . The Mission at Howrah became a permanent one in 1829. The English chapel in Cullen Place was built in 1821. This chapel had to be removed in 1865 and a new chapel of Gothic structure was built that very year at the junction of Dobson's Lane with King's Lane.

"The Mission of the Society for the Propagation of the Gospel was set on foot by the Society for Promoting Christian Knowledge.[3] Its first operations were chiefly confined to the establishment of circle schools during the years 1824 and 1830. The first enquirers the Mission had were from Sulkea, and it is remarkable that they were fishermen by caste. . . . In the early days of the Howrah Mission two respectable Brahmin ladies became converts to Christianity, one joining the Church of England, and the other the Baptists, and afterwards the Church of England. . . .

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[1] L. S. S. O'Malley and Monmohan Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. pp. 97-8.

[2] ibid. pp. 98-9.

[3] Please see chapters on Education & Culture and Public Life & Voluntary Social Service Organizations for detailed information on these points.

"In 1830 the Principal of Bishop's College put forth his best endeavours to have a permanent Church. Subscriptions were asked for and the entire cost of the building Rs. 19,000 was almost collected from this source. Government only contributed Rs. 1,200 and some materials. The building was constructed on a site granted by Government, consisting of five bighas of the ground, . . . and was finished in 1831 and consecrated under the name of 'St. Thomas' Church'. It then had one hundred and thirty seats. Its Services and parochial duties, as hitherto, were performed by the Principal and Professors of Bishop's College and the S.P.G. Missionaries. . . .

"The Roman Catholic Church standing in Cullen Place is a very large building of the Ionic style. It was built in 1832 by the Rev. Fre Paul de Gradoli, at a cost of Rs. 40,000 realised by contributions from wealthy Portuguese families in Calcutta, aided by a few local subscriptions. . . . The Church was, the same year that it was built, blessed and consecrated under the name of the 'Church of our Lady of the Happy Voyage.' It is supported by voluntary contributions, having no permanent funds at its command."[1]

Freedom movement

Details about mass movements connected with the freedom struggle in the district are hard to get, possibly because of its proximity to the city of Calcutta. It is thus very likely that the awakening of patriotic consciousness and its expression were linked with the larger stream of events in the metropolitan region. However, when the anti-Partition agitation of 1905 swept Bengal, the district did not lag out behind in holding public meetings, in organizing strikes and protests, and in creating a heightened awareness among the people of the ruthlessness of foreign oppression. A huge public meeting held at the Howrah Town Hall on August 29, 1905 supporting the Swadeshi movement was reported in the *Howrāh Hituishi* of September 2, 1905.[2] Simultaneously, the movement for boycotting foreign goods also went ahead. The *Sanjivani* of December 7, 1905 referred to a notice issued by Mr. Forrest, Magistrate of Howrah, to the effect that persons interfering with or intimidating people from buying foreign goods were to be arrested and punished and noted that such a warning was thoroughly illegal and should at once be withdrawn.[3] An incident at Andul, connected with this repressive measure was reported by the *Sandhyā* of the 7th December, 1905 and the *Bengali* of the 8th December, 1905. The *Sandhyā* of the 29th November, 1905 reported that in the Apprentice Department of the Sibpur Engineering College, the Bengali students of the 2nd Year Class refused to vacate the front portion of the class-room that had always been reserved for Eurasian students. This action on their part brought down on their

[1] C. N. Banerjei—op. cit. pp. 62-4.
[2] Confidential Report on the Native Newspapers of Bengal, second week of September, 1906.
[3] Ibid. 2nd week of December, 1905.

heads heavy punishments from the college authorities.[1] In May 1906 there were widespread disturbances and riots in Bauria. The *Howrāh Hitaishi* of the 24th May, 1906 reported the "inhuman oppression of the Whites" in that area and pointed out that 8,000 industrial workers had been on strike at different times since the 16th October of the previous year.[2] The *Bengali* of the 10th June, 1906 squarely blamed the European management of the Bauria Jute Mills for intimidating the workers not to give expression to their patriotic sentiments.

Even in the interior regions of the district the Swadeshi movement struck deep roots. The *Howrāh Hitaishi* of the 14th April, 1906 reported meetings in Khirishberia, Kamalpur (both in Syampur P.S.) and other neighbouring villages in which oaths to boycott foreign articles and to deal in *swadeshi* goods were taken by the people.[3]

In between the Swadeshi era and the advent of Gandhiji on the Indian political scene, there was no remarkable political development in the district and unlike many other places in Bengal, the incidence of terroristic activities was also low here.

In the twenties a noticeable feature of the political life of the district was the uninterrupted agitation carried on by some leaders among the industrial workers even while the Non-Cooperation movement was on. On the 7th of October 1923, Mrs. Santosh Kumari Gupta and Mukundalal Sarkar held a meeting at Howrah, attended by a huge body of workers in which they were said to have carried on "their anti-capital propaganda".[4]

Although the Howrah District Congress Committee was plagued by a split in its ranks from 1927 onwards,[5] which adversely affected its political programme, the activities of the trade unions in the form of strikes and other mass movements assumed much greater significance at the close of the third decade of the century than it had ever before. The focal point of this industrial unrest was a strike or a lock-out in the East Indian Railway Workshop at Lilua which was followed by a spate of sympathetic strikes in several other industrial undertakings. The chief among these were a strike in the Bally Jute Mills,[6] in the A. & J. Main's Works in Howrah,[7] in the Howrah branches of the Scavengers' Union of Bengal,[8] in the workshops of Messrs. Burn & Co., and Jessop & Co.,[9] in the workshop of the Howrah-Amta Light Railway and a riot at one of the stations situated on the railway,[10] in the Ludlow Jute Mills at Chengail in which the women

[1] ibid. 1st week of December, 1905.
[2] ibid. 1st week of June, 1906.
[3] ibid. 3rd week of April, 1906.
[4] Fortnightly Reports on the Political Situation in Bengal, First half of October, 1923.
[5] ibid. First and Second half of April, 1927.
[6] ibid. First half of November, 1927.
[7] ibid. Second half of February, 1928.
[8] loc. cit. and ibid. First half of April, 1928.
[9] ibid. Second half of April, 1928.
[10] loc. cit.

workers played a prominent part, and lastly, at the Fort Gloster Jute Mills near Bauria in which violence erupted and the police fired on the demonstrators.[1] The Government blamed "the Communists" and "one Mr. Philip Spratt[2] and his associates" for the industrial disputes,[3] but in its turn was condemned, along with the East Indian Railway authorities, for high-handed action and wanton repression, including firing on several occasions on the striking railway workers and their supporters (there being a major incident at Bamangachhi on the 28th March, 1928) in the report of a departmental enquiry committee.[4] The crux of the problem was the dispute at the Lilua Workshop which soon spread to Asansol, Ondal and other important railway centres, including the engineering works. Because of the participation in this agitation of some of the front-ranking labour leaders (some of whom are even today prominent trade unionists in India), the dispute in Howrah assumed a national character.

In 1930 Gandhiji launched his Civil Disobedience movement and the famous salt marches were organized, notably in Midnapore and Hooghly district. In the Howrah district the salt *satyāgraha* achieved notable success in the Syampur thana area. In Howrah town sporadic disturbance occurred in the wake of the May Day celebrations and a hartal was observed on 6th May, 1930 because of the arrest of Gandhiji. Throughout the 1930's, the situation in the industrial sphere also remained explosive with the labourers defying Government orders and security measures from time to time.

During the late thirties and the early forties of this century, political events in the district took varying turns with the emergence of splinter groups within the Congress and the appearance of new parties like the Forward Bloc. Moreover, a radical group of socialists broke away from the district Congress organization but refused to join forces with the local unit of the Communist Party since they considered themselves more extremists in thought and action.

With the launching of the 'Quit India' movement in August 1942, the simmering feeling of discontent among the politically conscious people of the district exploded in one great blaze of violent action in the shape of uprooting railway tracts, pulling down telegraph and telephone wires and street light posts and occasional looting of government and private property. After the arrest of the prominent leaders, the tension subsided, but political agitation in various forms continued by different political parties and groups in their own respective ways till the eve of Independence.[5]

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[1] ibid. First half of July, 1928.
[2] Philip Spratt was one of the earliest Marxist activists in India.
[3] ibid. Second half of April, 1928.
[4] ibid. First half of May, 1928.
[5] Tarashankar Chakravarti—*August Biplab* (1942) (in Bengali). Calcutta, 1946. Vol. I, *passim*.

CHAPTER III

PEOPLE

POPULATION

Total population of the district

According to the Census of 1961 the total population of Howrah district was 20,38,477 spread over an area of 1,450.70 sq. km.* (560 sq. miles).[1] The male and female populations numbered 11,27,392 and 9,11,085 respectively. The steady increase in the density of the district population per sq. mile since 1872 will be evident from the following table:

POPULATION DENSITY (PERSONS PER SQ. MILE) IN HOWRAH DISTRICT: 1872-1961

1872	1881	1891	1901	1911	1921	1931	1941	1951	1961
1,064	1,134	1,363	1,519	1,685	1,781	1,962	2,661	2,877	3,639

Population of subdivisions

The Howrah (Sadar) subdivision with an area of 445.69 sq. km. (174.10 sq. miles) has a total population of 11,74,651 consisting of 6,81,095 males and 4,93,556 females. The Uluberia subdivision having an area of 988.16 sq. km. (386.0 sq. miles) has a total population of 8,63,826 of whom 4,46,297 are males and 4,17,529 females.

Population of police stations

There are 17 police stations in the district of which 11 are in the Howrah (Sadar) subdivision, namely Howrah, Golabari, Malipanchghara, Bantra, Sibpur, Baly, Domjur, Jagachha, Jagatballavpur, Sankrail and Panchla. As Howrah city sprawls over the first four thanas and parts of the fifth and the sixth, the population figure for each of these police stations is not available from the Census of 1961 which enumerated the overall population of the city (including Howrah, Bantra, Malipanchghara, Golabari, and parts of Sibpur and Baly police stations) as 5,12,598 spread over 28.41 sq. km. or 11.1 sq. miles.[2] The population of that part of Baly P.S. which is outside Howrah city (41.72 sq. km. or 16.3 sq. miles) is 1,54,390 and that of a similar portion of Sibpur P.S. (1.28 sq. km. or 0.5 sq. miles) 374 according to the Census of 1961 which also puts down the populations of the thanas Jagachha (17.66 sq. km. or 6.9 sq. miles), Sankrail

*1,489 sq. km. according to the Central Statistical Organization, Cabinet Secretariat, Government of India.

[1] Census of India 1961, Vol. XVI, West Bengal & Sikkim, Part IIA, General Population Tables. p. 70.

[2] The respective areas (in sq. miles) of the police stations falling wholly or partly within the Howrah city are given within brackets: Howrah (0.93), Golabari (0.96), Malipanchghara (1.02), Bantra (1.33), Sibpur (4.43) and Baly (3.4).
Source: Superintendent of Police, Howrah.

61

5.5

5.8

7.9

1.2

5.0

7.8

4.5

2.9

7.9

6.6

nil

(63.48 sq. km. or 24.8 sq. miles), Panchla (70.14 sq. km. or 27.4 sq. miles), Jagatballavpur (126.72 sq. km. or 49.5 sq. miles) and Domjur (96.25 sq. km. or 37.6 sq. miles) as 57,002, 1,24,646, 93,024, 1,05,417 and 1,27,200 respectively.

The Uluberia subdivision has 6 police stations of which Bauria (14.33 sq. km. or 5.6 sq. miles), Uluberia (194.56 sq. km. or 76.0 sq. miles), Syampur (256.0 sq. km. or 100.0 sq. miles), Bagnan (162.04 sq. km. or 63.3 sq. miles), Amta (252.67 sq. km. or 98.7 sq. miles) and Uday Narayanpur (109.8 sq. km. or 42.4 sq. miles) had in 1961 populations of 41,579, 2,02,487, 1,71,327, 1,56,117, 2,07,438 and 84,878 respectively.

The density of population is naturally the highest in the industrialized and highly urbanized municipal towns of Howrah and Baly; it is 46,180 persons per sq. mile in the former and 22,184 persons per sq. mile in the latter. The concentration is perceptibly less in the more or less semi-urban thanas like Jagachha, Bauria, Sankrail, Panchla and Domjur where it is 8,261, 7,425, 5,026, 3,395 and 3,383 respectively. In the police stations which are overwhelmingly rural in character, population density falls still further and is 2,664 in Uluberia, 2,466 in Bagnan, 2,130 in Jagatballavpur, 2,102 in Amta, 2,002 in Uday Narayanpur and 1,713 in Syampur.

The following table gives complete population statistics of the district obtaining in 1872, 1901, 1931 and 1961 along with percentage variations over each 30-year period of enumeration.

POPULATION OF ADMINISTRATIVE DIVISIONS OF HOWRAH DISTRICT IN 1872, 1901, 1931 & 1961

District/ Subdivision/ Police Station	Population				Percentage variation		
	1872	1901	1931	1961	1872-1901	1901-31	1931-61
Howrah district	5,95,865	8,50,514	10,98,867	20,38,477	+42.7	+29.2	+85.5
Sadar Subdivision	2,97,064	4,29,678	5,70,693	11,74,651	+44.6	+32.8	+105.8
Howrah, Bantra, Golabari, Malipanchghara	83,923	1,57,320	2,24,873	5,12,598	+87.4	+42.9	+127.9
Sibpur (outside Howrah city)	146	274	232	374	+87.6	−15.3	+61.2
Baly	13,715	29,384	56,141	1,54.390	+114.2	+91.0	+175.0
Domjur	53,727	67,760	80,605	1,27.200	+26.1	+18.9	+57.8
Jagachha	11,389	14,364	18,121	57,002	+26.1	+26.1	+214.5
Sankrail	53,921	68,006	72,073	1,24,646	+26.1	+5.9	+72.9
Jagatballavpur	35,305	40,729	62,775	1,05,417	+15.3	+54.1	+67.9
Panchla	44,938	51,841	55,873	93,024	+15.3	+7.7	+66.6

Contd.

POPULATION OF ADMINISTRATIVE DIVISIONS OF HOWRAH DISTRICT IN 1872, 1901, 1931 & 1961—*Contd.*

District/ Subdivision/ Police Station	Population				Percentage variation		
	1872	1901	1931	1961	1872-1901	1901-31	1931-61
Uluberia Subdivision	2,98,801	4,20,836	5,28,174	8,63,826	+40.8	+25.5	+63.5
Amta	1,10,374	1,66,939	1,88,088	2,07,438 +84,878	+51.2	+12.6	+55.4
Bagnan	58,098	72,439	92,811	1,56,117	+24.6	+28.1	+68.2
Uluberia	54,952	76,228	1,16,004	2,02,487	+38.7	+52.1	+74.5
Syampur	60,423	84,487	1,05,650	1,71,327	+39.8	+25.0	+62.1
Bauria	14,954	20,743	25,621	41,579	+38.7	+23.5	+62.1

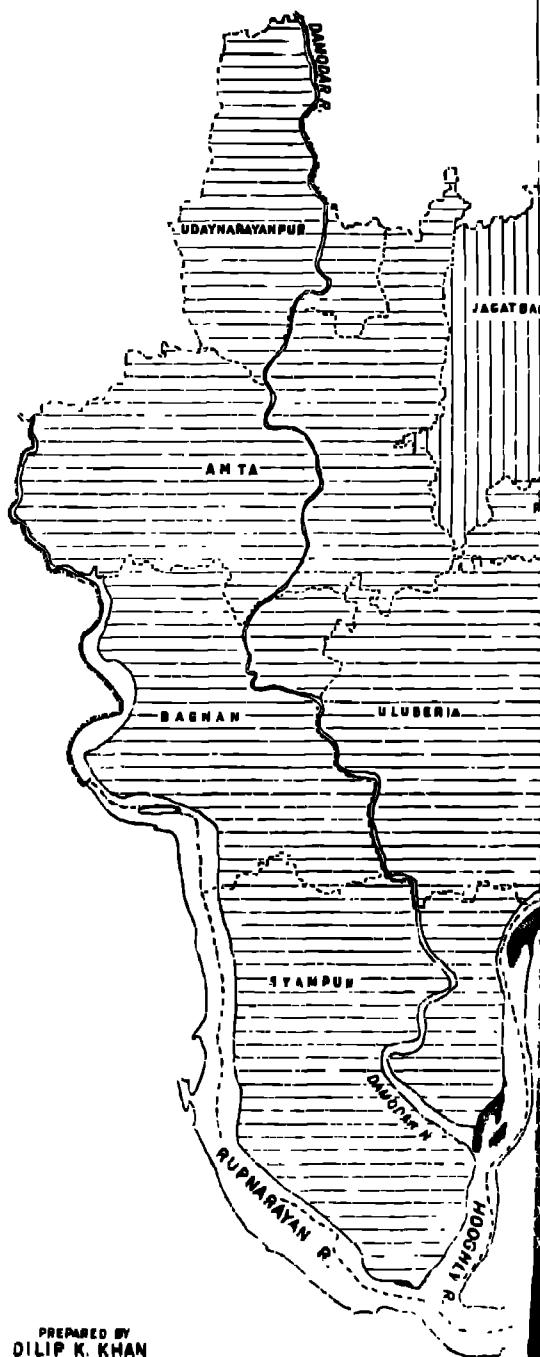
N.B.—Uday Naryanpur P.S. with a population of 84,878 was created just before the 1961 Census out of the Amta P.S. area. Its population has been added to that of the Amta P.S. to maintain comparability of the figures.

Although there has been a steady growth of population in all the police stations of the district since 1872, the increase—as is evident from the preceding table—has been spectacular, both in absolute and percentage figures, during the 30-year period from 1931 to 1961 when Jagachha P.S. registered the highest percentage increase of 214.5 followed by Baly P.S. with 175.0 and Howrah city with 127.9. The fact that the maximum rise in population has occurred during the 1931-61 period chiefly in the industrially advanced areas of the district points to factors other than normal increase in birth-rates as the contributing causes to this phenomenal growth brought about mainly by the immigration of a large number of displaced persons from East Pakistan as also of industrial labour from other parts of the country into these heavily industrialized parts of the district offering much better opportunities for earning a living.

Immigration & emigration

According to the Census of 1961 the total number of immigrants into the district was 4,26,976 (2,71,091 males and 1,55,855 females) forming 25.7% of the district population. They included 2,07,533 persons (1,62,028 males and 45,505 females) born in other States of India; 80,229 persons (46,382 males and 33,847 females) born in Pakistan; 4,318 persons (3,348 males and 970 females) born in other countries and 1,33,403 persons (58,303 males and 75,100 females) born in other districts of West Bengal. Only in the case of females born in other districts of the State does the total outnumber that of males. This may be partly due to brides from elsewhere coming to live in the district. The table below gives immigration figures for the district since 1901.

IMMIGRATION INTO HOWRAH DISTRICT: 1901-61

1901	1911	1921	1931	1941	1951	1961
87,168	1,09,304	1,29,186	1,37,514	2,06,350	2,01,926	3,36,208

DAMODAR R.
UDAYNARAYANPUR
AMTA
BAGNAN
ULUBERIA
SYAMPUR
DAMODAR R.
RUPNARAYAN R.
HOOGHLY R.
PREPARED BY
DILIP K. KHAN

The table shows steady rise in immigration except for 1951 showing a fall for which Mitra may be quoted: "The figure for 1951 includes 61,096 displaced persons from East Bengal. . . . But 1951, not counting the displaced population, shows a marked diminution in the number of immigrants. It is possible that Bihari and upcountry immigration did not recover its full volume after the riots of 1950, and it is also possible that whatever upcountry Muslim population that went away from industrial and agricultural areas were replaced by a Bengal-born population, thus reducing the demand for immigrant labour. It is, therefore, too early to suggest that industries in Howrah have reached a saturation point and begun to resist immigrant labour from outside the State."[1]

According to the Census of 1961, 79.1% of the total population of the district are born in it, 6.5% in other districts of West Bengal, 10.2% in other States of the country, 3.9% in Pakistan and 0.3% in other countries. The largest number of immigrants are from Bihar, Uttar Pradesh and Orissa, being 99,823 (78,431 males and 21,392 females), 60,870 (48,580 males and 12,290 females), and 24,061 (20,768 males and 3,293 females)[2] respectively. From the Census maps[3] it appears that they are largely concentrated in the north-eastern parts of the district which form its most industrialized and urbanized sectors. The Census map of 1961 shows that 21.19%, 19.23% and 59.58% of the rural-born immigrants into these urban areas are respectively from the same district, from other districts of West Bengal, and from other States of India.[4]

In the absence of recent figures of emigration from the district, the following statistics are quoted from the Census Handbook: Howrah, 1953.

EMIGRATION FROM HOWRAH: 1891-1951

1891	1901	1911	1921	1931	1941	1951
933	325	8,005	3,000	3,078	3 670	6,147

The figures are not large and Mitra's observations on the same are as follows: "Howrah sends out for temporary periods large numbers of male emigrants to 24-Parganas and Calcutta. Emigration from Howrah as elsewhere, however, does not necessarily prove that Howrah people are emigrating in a real sense. It is probable that the bulk of those born in Howrah but found elsewhere only happened to be born while their parents were temporarily sojourning in Howrah, and afterwards went back with them to their native country. This

[1] A. Mitra—Census 1951: West Bengal District Handbooks: Howrah. Calcutta, 1953. p. XV.

[2] Census of India 1961, Vol. XVI, West Bengal and Sikkim, Part II-C (ii) —Migration Tables (D-I to D-III). pp. 29, 47

[3] op. cit. bet. pp. 2 & 3.

[4] ibid. bet. pp. 2 & 3.

lacuna is inevitable in a mode of accounting in which birthplace is made the sole criterion of migration."[1]

Rural-urban distribution of population

Of the total area of 1450.7 sq. km. (560.1 sq. miles) of the district 1,335.5 sq. km. (515.7 sq. miles) are rural and 115.2 sq. km. (44.4 sq. miles) urban. In 1961 there were 12,13,385 persons (6,25,570 males and 5,87,815 females) in the rural areas and 8,25,092 persons (5,01,822 males and 3,23,270 females) in the urban areas of the district constituting respectively 59.5% and 40.5% of the district population. Against the overall density of 3,639 persons per sq. mile in the district, the corresponding figures for the rural and urban areas were 2,353 and 18,554 respectively. In 1961 there were 23 towns and 787 inhabited and 11 uninhabited villages in the district.[2] According to the 1961 Census, Howrah city has a population of 5,12,598 persons accounting for a density of 46,056 per sq. mile while Baly, the other municipal town, has 1,01,159 residents and a density of 14,432 per sq. mile. In 1961 the following new towns[3] have been added to the list of towns in the district, namely Domjur, Kolara, Nibra, Mahiari, Jagachha, Santragachhi, Unsani, Sankrail, Sarenga, Manikpur, Jhorhat, Andul, Banupur, Panchla, Amta, Chengail, Banitabala, Burikhali and Fort Gloster—the populations in them varying from 4,690 in Andul to 14,831 in Chengail. According to the Census of 1961 there are 17 villages in the district each with a population of 5,000 or more and 3 towns with populations below 5,000.

In the Howrah (Sadar) subdivision, comprising 450.9 sq. km. (174.1 sq. miles), rural and urban populations number 4,23,944 and 7,50,707 respectively. Thus 63.9% of the total population (11,74,651) of the subdivision live in urban areas. In the Uluberia subdivision, on the other hand, the rural and urban populations number 7,89,441 and 74,385 respectively against a total population of 8,63,826 living in the subdivision. Thus 91.3% of the population of Uluberia subdivision live in rural areas. While the Sadar subdivision includes the two densely populated municipal towns of Howrah and Baly, the Uluberia subdivision has none. The city of Howrah sprawling along the Bhagirathi for about 28.8 sq. km. (11.1 sq. miles), contains 25.1% of the district population while Baly, the contiguous town to the north with an area of 11.81 sq. km. (4.56 sq. miles) and a population of 1,01,159 accounts for 4.9% of the same.

The following table[4] gives subdivision and thanawise distribution of population between urban and rural areas of the district as obtaining in 1961.

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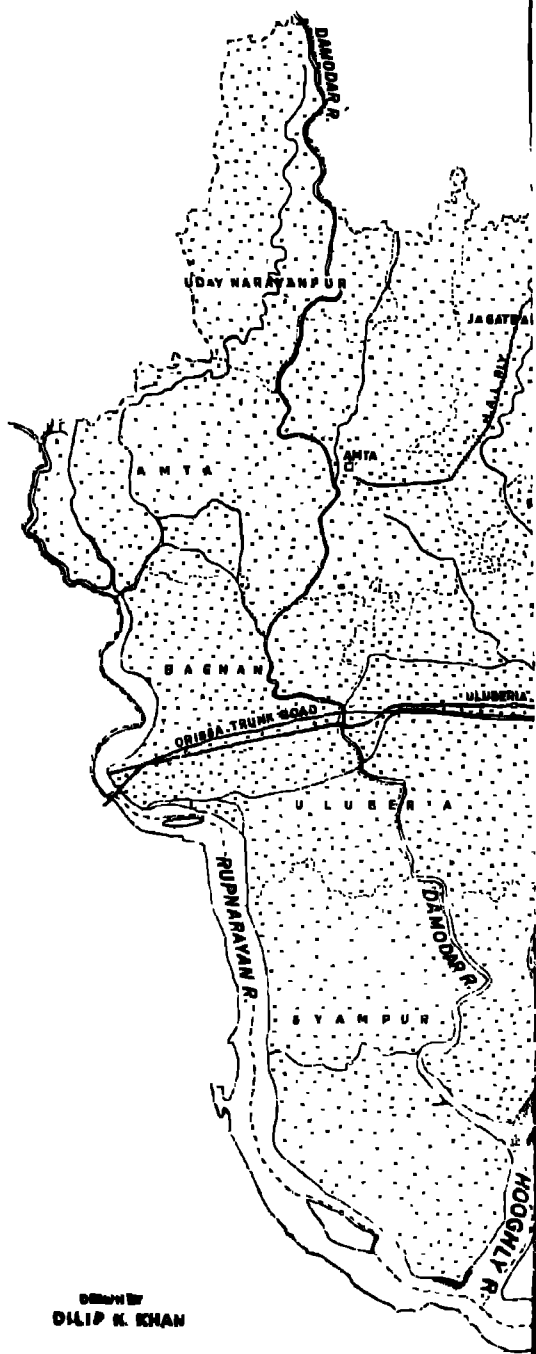
[1] A. Mitra —Census 1951: West Bengal District Handbooks: Calcutta, 1953. p. XV.

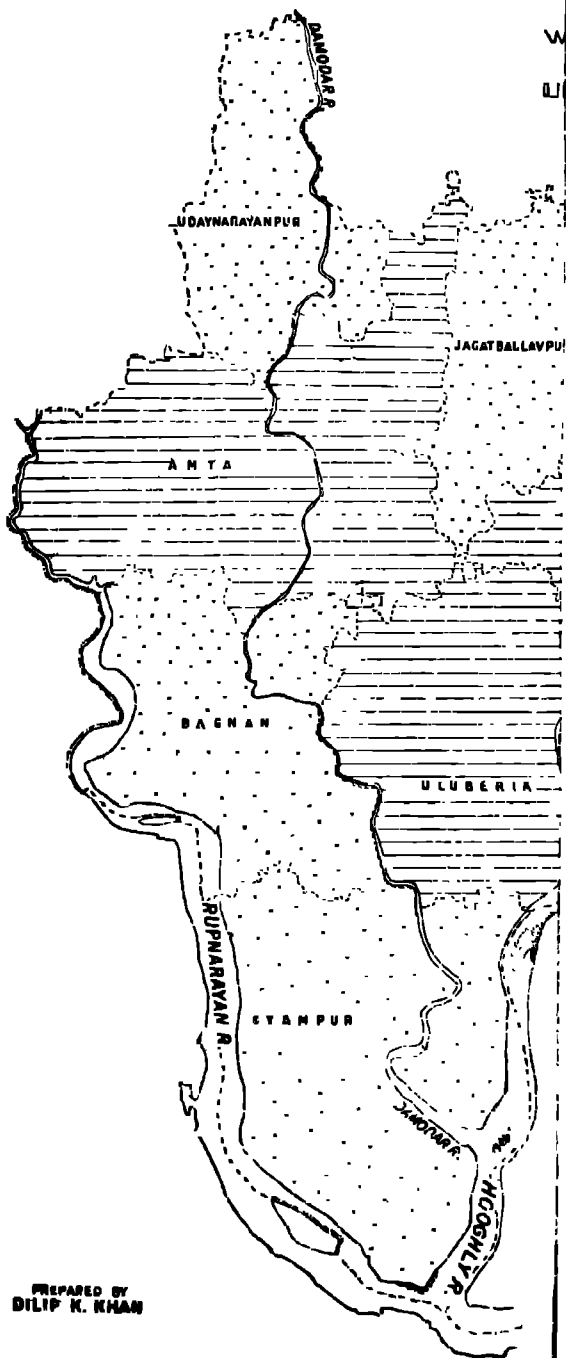
[2] Census of India 1961, Vol. XVI, West Bengal & Sikkim, pt. II-A, General Population Tables. p. 107.

[3] ibid. p. 243.

[4] ibid. p. 107.

DAMODAR R.
UDAY NARAYANPUR
AMTA
BAGNAN
ORISSA TRUNK ROAD
ULUBERIA
ULUBERIA
RUPNARAYAN R.
DAMODAR R.
SYAMPUR
HOOGHLY R.
DILIP K. KHAN

District/Subdivision/Police Station/ Town-Group/Town		Area in sq. miles	Total No. of persons enumerated (including inmates of institutions & houseless persons)
Howrah District	Total	560.1	20,38,477
	Rural	515.7	12.13,385
	Urban	44.4	8,25,092
Sadar Subdivision	T	174.1	11,74,651
	R	138.9	4,23,944
	U	35.2	7,50,707
Baly P. S. (outside Howrah city)	T	16.3	1,54,390
	R	7.2	23,494
	U	9.1	1,30,896
Baly Town	U	9.07	1,30.896
(*a*) Baly (M)	U	4.56	1,01,159
(*b*) Baly (N.M.)	U	4.51	29,737
Howrah city (including Howrah,	T	11.1	5,12,598
Bantra, Malipanchghara, Golabari	R	—	—
and parts of Sibpur and Baly P.S.)	U	11.1	5,12,598
Howrah (M)	U	11.13	5,12.598
Sibpur (outside Howrah city)	T	0.5	374
	R	0 5	374
	U	—	—
Jagachha P.S.	T	6.9	57,002
	R	3.7	36,908
	U	3.2	20,094
Jagachha Town-Group	U	3.22	20,094
(*a*) Jagachha (N.M.)	U	0.54	4,758
(*b*) Santragachi (N.M.)	U	0.63	8.701
(*c*) Unsani (N.M.)	U	2.05	6,635
Sankrail P.S.	T	24.8	1,24,646
	R	20.1	77,472
	U	4.7	47,174
Sankrail Town-Group	U	4.66	47,174
(*a*) Sankrail (N.M.)	U	1.09	11,844
(*b*) Sarenga (N.M.)	U	1.68	10,704

7

District/Subdivision/Police Station/ Town-Group/Town		Area in sq. miles	Total No. of persons enumerated (including inmates of institutions & houseless persons)
(c) Manikpur (N.M.)	U	0.93	7,844
(d) Jhorhat (N.M.)	U	0.56	6,438
(e) Andul (N.M.)	U	0.20	4,690
(f) Banupur (N.M.)	U	0.20	5,654
Panchla P.S.	T	27.4	93,024
	R	25.7	83,922
	U	1.7	9,102
Panchla (N.M.)	U	1.74	9,102
Jagatballavpur P.S.	T	49.5	1,05,417
	R	49.5	1,05,417
	U	—	—
Domjur P.S.	T	37.6	1,27,200
	R	32.2	96,357
	U	5.4	30,843
Domjur Town-Group	U	5.43	30,843
(a) Domjur (N.M.)	U	1.48	8,670
(b) Kolara (N.M.)	U	1.79	8,495
(c) Nibra (N.M.)	U	1.34	6,599
(d) Mahiari (N.M.)	U	0.82	7,079
Uluberia Subdivision	T	386.0	8,63,826
	R	376.8	7,89,441
	U	9.2	74,385
Uluberia Town-Group	U	7.51	66,299
(In Bauria P.S.)	U	2.82	27,980
(a) Bauria (N.M.)	U	1.17	8,492
(b) Burikhali (N.M.)	U	0.72	5,703
(c) Fort Gloster (N.M.)	U	0.93	13,785
(In Uluberia P.S.)	U	4.69	38,319
(a) Chengail (N.M.)	U	1.56	14,831
(b) Uluberia (N.M.)	U	1.94	18,509
(c) Banitabala (N.M.)	U	1.19	4,979

DAMODAR R.
UDAYNARAYANPUR
JAGATBALLAVPU
AMTA
BAGNAN
ULUBERIA
RUPNARAYAN R.
SYAMPUR
DAMODAR R.
HOOGHLY R.
PREPARED BY
DILIP K. KHAN

District/Subdivision/Police Station/ Town-Group/Town		Area in sq. miles	Total No. of persons enumerated (including inmates of institutions & houseless persons)
Bauria[1] P.S.	T	2.8	13,599
	R	2.8	13,599
	U	—	—
Uluberia[2] P.S.	T	71.3	1.64,168
	R	71.3	1,64,168
	U	—	—
Syampur P.S.	T	100.0	1,71,327
	R	100.0	1,71,327
	U	—	—
Bagnan P.S.	T	63.3	1,56,117
	R	63.3	1,56,117
	U	—	—
Amta P.S.	T	98.7	2,07,438
	R	97.0	1,99,352
	U	1.7	8,086
Amta (N.M.)	U	1.71	8,086
Uday Narayanpur	T	42.4	84,878
	R	42.4	84,878
	U	—	—

The decade percentage variations of population in urban and rural areas of the district are given in the table below:

DECADE PERCENTAGE VARIATIONS OF POPULATION IN HOWRAH DISTRICT: 1931-61

	1931-41	1941-51	1951-61
Total	+ 35.62	+ 8.12	+ 26.51
Rural	+ 25.72	+ 2.68	+ 11.42
Urban	+ 68.36	+ 21.56	+ 57.97

[1] Bauria P.S. excludes an urban population of 27,980 which is included in Uluberia Town-Group under Bauria (N.M.), Burikhali (N.M.) and Fort Gloster (N.M.) towns.

[2] Uluberia P.S. includes an urban population of 38,319 which is included in Uluberia Town-Group under Chengail (N.M.), Uluberia (N.M.) and Banitabala (N.M.) towns.

The fact that there are 210 inhabited villages in Howrah (Sadar) subdivision against Uluberia's 577 clearly indicates that the former is much more urbanized than the latter. It is also seen that the populous villages are found in greater number in Howrah (Sadar) than in Uluberia subdivision. For instance, there is a village in the Jagachha police station with a population exceeding 10,000. Such concentration of people in the villages of the Howrah (Sadar) subdivision points to the conclusion that the villages in it are becoming more urbanized and attracting an increasing number of people towards them. The following table gives the rural-urban migration figures for Howrah and Baly, the two foremost towns in the district.[1]

RURAL-URBAN MIGRATION IN HOWRAH AND BALY MUNICIPAL TOWNS

		Howrah	Baly
Total population		4,62,804	1,09,078
Male ,,		2,83,440	71,752
Female ,,		1,79,364	37,326
Born in rural areas of Howrah district and resident in the city for less than 3 years	Males	4,208	1,014
	Females	2,841	640
Born in rural areas of Howrah district and resident in the city for 3 years and more	Males	12,905	1,223
	Females	9,996	839
Born in rural areas of other districts in the State and resident in the city for less than 3 years	Males	4,079	2,664
	Females	2,665	1.010
Born in rural areas of other districts in the State and resident in the city for 3 years and more	Males	14,753	5,527
	Females	9.437	3,058
Born in rural areas outside the State and resident in the city for less than 3 years	Males	16,982	6,654
	Females	6,585	1,169
Born in rural areas outside the State and resident in the city for 3 years and more	Males	71,333	19,619
	Females	17.340	1,969

It would appear from the preceding table that the largest number of rural-born migrants to the two cities of Howrah and Baly are from outside the State, followed, in that order, by persons born in the rural areas of other districts of the State and in analogous areas in the district itself. It also appears that irrespective of whether the migrants are residing in the two towns for more than 3 years or less, the male-female ratio per 100 persons in Howrah city for those born in the rural areas of the same district is 58 : 42, for persons born in

[1] Census of India 1961, Vol. XVI, West Bengal & Sikkim, Part II-C (ii), Migration Tables, (D-IV to D-VI), p. 154.

the rural areas of other districts of the State 61 : 39 and for persons born in the rural areas outside the State 79 : 21. The corresponding figures for Baly are 53 : 47, 67 : 33 and 90 : 10. The disparity in the case of migrants from other States is very noticeable indeed, the principal reason being that these immigrants usually leave behind their women-folk at their homes.

The preceding table also brings out the apparently paradoxical fact that although the urban areas of the district with their numerous industries and trade facilities offer plenty of opportunities for earning a living, the people born in its rural areas are not drawn to the urban areas in sufficient numbers. This issue has been studied by a social scientist[1] whose views are as follows: "The rural folk surrounding a township are prone to maintain rural-urban dichotomy in their settlement while inflating the suburbs by moving into the periphery of the town in order to utilize the amenities of life and living therein. . . . From beyond the immediate neighbourhood, however, the rural people do move into urban areas; and it is rural-urban migration which characterizes the pattern of settlement in cities and towns alike. This becomes evident from an examination of the patrivirilocal ancestral residence of the "heads" of co-resident and commensal kin-groups in Calcutta and Howrah, virtually the only cities in West Bengal (Col. 5, Table *below*):

	Percentage of total family units and non-familial units in each city/town of those with their patrivirilocal ancestral homes located in				Percentage to total rural-urban migrant units from anywhere in India to each city/town of those still maintaining their patrivirilocal ancestral residence in villages		
City or Town	Same City or Town	Outside India or East Pakistan	Elsewhere in India or East Pakistan	Percentage of rural to total migrant units from India or East Pakistan	Family units	Non-familial units	Either
Calcutta	5	1	94	91	26	65	58
Howrah	8	—	92	96	37	74	58

". . . It is also noticed that this process is particularly manifest with respect to the non-familial units; that is, individuals living by themselves in cities and towns and not with any kin or affine (cols. 6 & 7). These persons could have been absorbed in urban life with less possibilities towards backsliding to rural if they had severed their connections with paternal ancestral homes. Contrariwise, if they maintain such a vital concept (as the figures point out), it could be supposed that they would help in bridging the assumed gulf of difference

[1] Ramkrishna Mukherjee—The Sociologist & Social Change in India Today. New Delhi, 1965. pp. 18-20.

between urban and rural life. For along with analogous family-units, they could then become carriers of urban 'values' to villagers.

City/Town	Percentage to total rural-urban migrant units from region anywhere in India to each city/town, of those with the patrivirilocal ancestral home located in			Percentage of rural-urban migrant units still maintaining their patrivirilocal ancestral residence in villages to the total number of units immigrated to each city/town from		
	Same local area (district)	Same cultural region (W.Bengal)	Other cultural region	Same local area	Same cultural region	Other cultural region
Calcutta	3	40	60	21	45	66
Howrah	2	37	63	23	59	57

"We first notice that rural-urban migration . . . from the same *cultural regions is the distinctive feature of . . . the cities* (cols. 2-4). The pattern of rural-urban migration thus appears to facilitate the operation of the concept of rural-urban continuum for the common run of towns but not for the specialized ones or for the cities. The rural immigrants to all these urban settlements maintain their patrivirilocal ancestral residence in villages the most frequently if they have moved in from other cultural regions; and that this characteristic of the migrants is no less visible for the common run of towns than for the specialized ones and the cities (cols. 5-7). That is, by cultural hiatus between regions of emigration and immigration or by the severance of rural-urban contact with the local and/or the same culture-area, the pattern of rural-urban migration in West Bengal tends, on the whole, to facilitate rural-urban dichotomy more than rural-urban continuum."

That a village not far from a city is not always drawn into the vortex of urban life is further evident from a resurvey conducted in June 1962 over the initial survey of January, 1957 of a village named, Mahisgot in Sankrail thana, only 1½ miles away from Sankrail railway station on the South-Eastern Railway's main line and within the Howrah (Sadar) subdivision. To quote from the relevant report[1]—"The physical proximity to the Calcutta complex made the backward community of Mahisgot more insular and inhibitive in character." The reasons for this were enumerated as follows: "The population of Mahisgot belongs to a comparatively backward fishermen caste. Development of Calcutta's industrial complex took place too long ago for any perceptible difference to occur within the 5 years under reference. Calcutta's old industrial development was not an indigenous outcome. It neither took any planned path of using the area's human and material resources. Hence, the apparently para-

[1] Dr. G. C. Mondal & N. Bandyopadhyay—Mohisgot Village Survey. Santiniketan, 1967.

doxical but widely prevalent co-existence of modern industry and backward agriculture, areas of acute poverty and plenty, considerable educational advance and absolute areas of darkness."

Male-female ratio

According to the 1961 Census the overall male-female ratio in the district was 808 females per 1,000 males. In the rural areas the ratio was 940:1,000 while in the urban areas it was 644: 1,000. For West Bengal taken as a whole, the ratio was 878 females per 1,000 males, the corresponding figures for the rural and urban areas of the whole State being 943:1,000 and 701:1,000 respectively. The disparity between males and females is the highest in the cities, lowest in the remote rural areas and midway between the two in semi-urban areas classified as towns in the Census of 1961. In Howrah city, for instance, there are only 629 females for every 1,000 males and in the Baly urban area the corresponding figures are 552 and 1,000. That immigrant male labour leaving behind their women-folk at home and entering the urban areas in search of employment swells the figures for males in the city areas has already been stated. The picture is very different in rural areas. For example, in Jagatballavpur and Syampur thanas— both rural areas--there are 978 and 967 females respectively per 1,000 males, the relative female populations at these places far exceeding those for the whole district. The position is midway in semi-urban or suburban areas like Jagachha where there are 842 females per 1,000 males. The male-female ratio obtaining in the whole of the district between 1901 and 1961 is given in the table below:

MALE-FEMALE RATIO IN HOWRAH DISTRICT: 1901-61

Year	Population		Females (per 1,000 males)
	Male	Female	
1901	4,39,525	4,10,989	935
1911	4,98,641	4,44,861	892
1921	5,35,151	4,62,252	864
1931	5,99,075	4,99,792	834
1941	8,33,431	6,56,873	788
1951	8,90,204	7,21,169	810
1961	11,27,392	9,11,085	808

Displaced persons

The Census of 1951 enumerated 61,096 persons[1] (32,984 males and 28.112 females) belonging to the minority communities in Pakistan to have moved into the Howrah district between 1946 and 1951. Barring a few from West Pakistan, the rest came from all over East

[1] A. Mitra - Census 1951: West Bengal District Handbooks: Howrah. Calcutta, 1953. p. 111.

Bengal. In a contemporaneous survey report,[1] the districts of origin (in East Pakistan) of these migrants were given as follows: Dacca (31.0%), Barisal (18.2%), Faridpur (13.6%), Noakhali (7.1%), Chittagong (4.5%) and Mymensingh (4.4%), followed by other districts with lower percentage figures. According to the Census of 1961[2] there were 80,229 Pakistan-born persons in the district, of whom 46,382 were males, and 33,847 females. In rural areas such persons numbered 13,687 (7,485 males and 6,202 females) while in the urban areas their number was 66,542 (38,897 males and 27,645 females). The State Statistical Bureau's survey report of 1951,[3] however, placed their number at 75,895 in the rural areas and 10,549 in the urban areas of the district. A great shift of this population towards the urban area appears to have taken place during the decade 1951-61 for obvious reasons. Another survey report[4] gave the following detailed figures about the subdivision and thanawise distribution of refugees in the district outside Govt. camps in 1955.

DISTRIBUTION OF DISPLACED PERSONS IN HOWRAH DISTRICT: 1955

	No. of families	No. of members
Howrah district	16,318	82,043
Sadar Subdivision	14,844	75,861
Howrah city (including Sibpur)	9,921	49,630
Baly (P.S.)	3,499	18,842
Baly (Town)	2,024	9,281
Domjur P.S.	176	604
Jagachha P.S.	775	4,394
Sankrail P.S.	303	1,676
Jagatballavpur P.S.	140	638
Panchla P.S.	30	77
Uluberia subdivision	1,474	6,182
Amta P.S.	180	642
Bagnan P.S.	335	1,325
Uluberia P.S.	451	1.944
Syampur P.S.	54	258
Bauria P.S.	454	2,012

[1] State Statistical Bureau, Government of West Bengal—Report on the sample Survey for estimating the socio-economic characteristics of displaced persons from Eastern Pakistan to the State of West Bengal. Calcutta, 1951. p. 16.
[2] Census of India 1961, Vol. XVI, West Bengal & Sikkim, Pt. II-C (ii), Migration Tables. Calcutta, 1965. p. 65.
[3] State Statistical Bureau—op. cit. p. 13.
[4] State Statistical Bureau, Government of West Bengal—Rehabilitation of Refugees: A Statistical Survey, 1955. Calcutta, 1956. pp. 89-90.

In 1961 displaced persons from Pakistan constituted 3.9% of the total population of the district.[1] In the two big towns of Howrah and Baly, the percentages of Pakistan-born persons enumerated during the Census of 1961[2] were 7.78% and 14.85% respectively. Of the Pakistan-born persons resident in the district, workers numbered 30,526 males and 1,299 females. Only 58 males and 3 females were engaged as cultivators and 85 males were enumerated as agricultural labour. 146 males were engaged in mining, quarrying, live-stock, forestry, fishing etc. while 269 males and 72 females were employed in household industries. In manufacturing industries other than household industries there were as many as 12,667 males and 193 females while 572 males and 6 females were engaged in constructional works. Trade and commerce absorbed 3,910 males and 41 females. It is seen that the largest number of working displaced persons were engaged in manufacturing callings other than household industry and that in urban areas. Second in numerical strength were those employed in trade and commerce in urban areas, followed by persons at work on transport, storage and communications. In every trade males far outnumbered females.

A survey[3] undertaken by the State Statistical Bureau in 1955 revealed that in the urban sector the largest number of displaced persons were engaged in services other than Government or domestic service, followed by persons engaged in trade and Government service, in that order. In the rural sector the largest number was employed under Government and in occupations other than domestic service. The following table depicts the economic condition of migrant families (other than single-member families) outside Government camps as assessed in the same survey report:[4]

ECONOMIC CONDITION OF DISPLACED PERSONS IN HOWRAH DISTRICT: 1955

(Figures in thousand)

	Urban	Rural	Total	Percentage
Distressed	0.9	0.2	1.1	7.33
In want	6.3	2.8	9.1	60.67
Others	3.8	1.0	4.8	32.00
Total	11.0	4.0	15.0	100.00

There are 22 Government sponsored refugee colonies in the district, 18 in Sadar and 4 in Uluberia subdivision of which only one (Sakrahati

[1] Census of India 1961, Vol. XVI, West Bengal & Sikkim, Pt. II-C(ii), Migration Tables, (D-I to D-III).
[2] Census of India 1961, Vol. XVI, West Bengal & Sikkim, Pt. II-C(iii), Migration Tables, (D-IV to D-VI).
[3] State Statistical Bureau, Govt. of West Bengal—Rehabilitation of Refugees, A Statistical Survey, 1955. Calcutta. 1956.
[4] Ibid., p. 72.

Scheme No. 1) is rural and the rest urban. They were established between 1949 and 1965. In each colony 3 to 5 cottahs of land is given in permissive possession to a family which is also entitled to receive a loan of Rs. 1,450 for the construction of a house (including Rs. 200 for a sanitary privy) and Rs. 750 as small trade loan provided there is no service-holder in the family. Because of the indigence of many loanees, Rs. 12,69,500 towards principal and Rs. 3,95,153 by way of interest had to be written off in favour of 1,271 families up to April 1967. There are primary schools and tube-wells in all the colonies many of which now possess drains and well-planned roads. The following table gives details of these 22 Government sponsored refugee colonies in the district.[1]

PARTICULARS OF GOVT. SPONSORED REFUGEE COLONIES IN HOWRAH DISTRICT

Name of Colony	Police Station	Area acquired (acres)	Homestead plots (or No. of families settled)
Sadar Subdivision			
Baly-Nischinda Scheme No. I	Baly	19.48	91
Baly-Nischinda Scheme No. II	,,	40.94	331
Baly-Sapuipara Scheme	,,	10.41	81
Baly-Abhoynagar Scheme	,,	27.13	242
Uttar Baksara Scheme No. I	Jagachha	10.78	83
Uttar Baksara Scheme No. II	,,	8.27	18
Jagachha Scheme	,,	13.24	115
Santragachhi Scheme	,,	3.64	38
Tuilya-Unsani Scheme	,,	6.48	76
Lilua Scheme	Lilua	19.89	162
Chakpara Scheme	,,	25.29	198
Belgachhi Scheme	,,	5.02	57
Dharsa Scheme	,,	14.52	113
Podra Scheme	Sankrail	15.44	114
Guabaria Scheme	,,	15.04	97
Jagatballavpur Scheme	Jagatballavpur	20.92	123
Sakrahati Scheme No. I	,,	6.00	37
Sakrahati Scheme No. II	,,	11.66	55
Uluberia Subdivision			
Bauria Scheme No. I	Bauria	18.23	146
Bauria Scheme No. II	,,	29.01	148
Syamsundarchak Scheme	Uluberia	36.81	200
Balarampota Scheme	,,	20.39	141
Total		378.59	2,666

[1] Source: Dy. Controller of Refugee Relief & Rehabilitation, Howrah.

HOWRAH

Apart from the 2,666 families settled in Government sponsored colonies, some 2,500 families have been settled within the municipal areas of Howrah and Baly and nearby rural areas with the help of land purchase and house-building loan schemes. Each family, under these schemes, has been given a minimum land purchase loan of Rs. 600 and a minimum house-building loan of Rs. 1,450.

Howrah slums

A survey of slums in the urban areas of the district undertaken by the Calcutta Metropolitan Planning Organization in 1964-65 gave the following figures:

PARTICULARS OF SLUMS IN HOWRAH DISTRICT

Locality	Population (000's)	Area (acres)	Density per acre	Families (000's)	Average Family
Howrah City	186	600	310	41.4	4.5
Baly Town	31	143	214	6.5	4.7
Sankrail P.S.	6	45	138	not available	not available

To quote from the same survey report: "The overwhelming concentration of bustees is within Howrah Municipality itself. . . . Howrah Municipality (city) has an area of 11.35 square miles and a population of 512,598 (1961 Census), and the bustees alone in Howrah city have a population of about 186,000 and cover about 600 acres. In other words then, 36 per cent reside in the bustees covering 8.8 per cent of the area with a density of slightly over 300 per acre." The following detalied statistics about slums in Howrah city are reproduced from the same survey report.

PARTICULARS OF SLUMS IN HOWRAH CITY: 1964-65

Electoral Ward No.	Population	No. of Families	Area (acres)	Population density per acre	Average family size
1	3,397	755	15.4	220.6	4.5
2	4,130	918	22.5	183.5	4.5
3	10,716	2,381	52.0	206.1	4.5
4	8,375	1,861	46.0	182.1	4.5
5	6,144	1,365	16.9	363.5	4.5
6	5,303	1,178	16.3	325.3	4.5
7	4,994	1,086	20.0	249.7	4.6
8	6,584	1,463	19.3	341.1	4.5
9	24,600	5,467	60.0	410.0	4.5
10	4,401	936	16.6	282.1	4.7
11	18,275	4,061	73.1	250.0	4.5

Contd.

PARTICULARS OF SLUMS IN HOWRAH CITY: 1964-65—*(Contd.)*

Electoral Ward No.	Population	No. of Families	Area (acres)	Population density per acre	Averge family size
12	6,818	1,427	15.8	431.5	4.8
13	7,998	1,694	19.3	414.4	4.7
14	2,882	640	15.0	192.1	4.5
15	1,316	292	7.6	173.1	4.5
16	3,008	668	16.8	179.0	4.5
17	3,239	720	7.3	443.7	4.5
18	2,762	614	9.7	284.7	4.5
19	5,185	1,251	8.0	648.1	4.1
20	16,117	3,803	21.7	742.7	4.2
21	4,856	1,132	8.0	607.0	4.3
22	11,426	2,574	21.3	649.2	4.4
23	10,877	2,211	21.7	503.6	4.9
24	1,387	308	2.4	577.9	4.5
25	2,595	523	13.3	195.1	5.0
26	890	198	7.8	114.1	4.5
27	512	114	5.8	88.3	4.5
28	4,080	907	13.6	268.0	3.2
29	1,293	540	13.3	97.2	3.5
30	1,737	360	13.2	131.6	4.5
Total	1,85,897 (36%)	41,447	599.7 (8.8%)	310.0	4.5

The slums are largely concentrated along Grand Trunk Road and in the northern and central portions of the city. The following table giving dispersal data of the Howrah bustees are quoted from the same survey report.

ZONAL CLUSTERS OF BUSTEES IN HOWRAH CITY

Name of Area	Population (1964-65)	Area (acres)
Ghusuri	19,091	98
Salkia	16,441	53
Dharamtola	10,714	42
Pilkhana	47,272	150
Bantra	9.169	48
Panchanantala	36,118	65
Mullick Fatak	33,160	68
Sibpur	5,928	33
Botanical Gardens etc.	3,777	20
	1,81,670	577
Scattered Slums	4,227	23
Howrah Total	1,85,897	600

A 3% sample survey[1] of the Howrah slums carried out by the same agency indicates that Bāṅgālees constitute about 52 per cent of the total families there of which about 7 per cent are refugee families. Bihar contributes about 17 per cent of the families and Uttar Pradesh another 21 per cent. About 10 per cent come from other States of India, namely Orissa, Andhra, Madras and the Punjab. Of all the bustee families, about 47 per cent have incomes of Rs. 100 or less per month, 35 per cent have incomes between Rs. 101 and Rs. 200 (Rs. 101-150, 23.5 per cent), and 18 per cent above 200 rupees per month. Nearly two-thirds of the slum families had only one earner in them, and 23 per cent had 2 earners per family, while the rest (11 per cent) had 3 or more earners.

Twenty-three per cent of the families surveyed owned their own huts. Of those who did pay rents, about 40 per cent paid between six and eight rupees per month and another 26 per cent paid between nine and eleven rupees per month. Eighteen per cent of the tenants paid between Rs. 12 and Rs. 20, while about 14 per cent paid five rupees per month or less.

The hut structures are mostly of the kutcha type (i.e. built of bamboo-mud or tin walls), poorly built, broken, or otherwise damaged, resulting in leaking roofs, dampness, extreme heat and inadequate ventilation.

Nearly 76 per cent of the bustee huts are without any electricity and they mostly use kerosene lanterns or lamps. Only 24 per cent of the huts have electricity, and even among these, the electric connexions are generally confined to the rooms of the hutowners. With the insanitary surroundings, tanks, ditches, narrow lanes and bye-lanes and kutcha drains, the conditions of the slums without adequate lighting becomes perfectly miserable, particularly during the rainy seasons.

The wardwise distribution of the slum population in Baly municipal area as found in 1964-65 is given below:

BALY BUSTEES: 1964-65

Ward No.	Population	Area (acres)	Population density (per acre)
I	2,670	19.0	140.5
II	500	3.6	138.9
III	1,956	8.2	238.5
IV	22,000	90.7	242.5
V	3,500	21.6	162.0

As regards slums in Sankrail thana, the total population there in 1964-65 was 11,000.

[1] Calcutta Metropolitan Planning Organization, Howrah Planning Team—Basic Data Report for the Howrah Planning area, pt. I, 1965.

LANGUAGES

Bengali speakers form by far the largest single language group in the district. According to the Census of 1961, they numbered 17,42,373 (9,13,422 males and 8,28,951 females) accounting for 85.4% of the district population. Hindi speakers, numbering 1,81,167 (1,34,658 males and 46,509 females) and constituting 8.8% of the district population, come next while Urdu speakers numbering 62,973 (41,115 males and 21,858 females) and forming 3.8% of the district population occupy the third place. Among the minor language groups, Oriyas number 25,957 (21,873 males and 4,084 females) and constitute 1.2% of the district population; Telugu speakers number 9,356, Gurmukhi speakers 3,559, Nepali speakers 3,514 and Tamil speakers 2,226. There are other languages as well which add varied colour to the linguistic panorama of the district. For instance, in 1961 there were 1,610 Santali speakers and 473 Kurukh (Oraon) speakers resident in the district.

It is of considerable interest to look into the variations in the population strengths of the different language groups in the district since the beginning of the present century. In 1901 Bengali speakers numbering 7,51,666 constituted 88.3%; Hindi speakers (including 688 Urdu speakers) numbering 85,490 formed 10.05% and Oriya speakers numbering 8,299 accounted for 0.97% of the district population The table below shows the generation variation of populations belonging to the two most important language groups in the district:

GENERATION VARIATION OF POPULATION IN THE TWO MOST IMPORTANT LANGUAGE GROUPS IN HOWRAH DISTRICT

	1901	1931	1961
Bengali			
Total population	7,51,666	9,36,921	17,42,374
Percentage variation	—	+24.6	+85.0
Percentage of the district population	88.3	85.2	88.4
Hindi			
Total population	85,490	1,12,501	1,81,197
Percentage variation	—	+31.0	+61.0
Percentage of the district population	10.0	10.2	8.8

From the foregoing table it appears that the percentage of Bengali speakers to the total population in the district recorded a fall at the end of the first 30-year period (1901-31) but a rise at the end of the next (1931-61)—the influx of East Bengal refugees as also the normal growth accounting for the latter. The Hindi speakers, on the other hand, recorded a slight percentage increase at the end of the first 30-year period but a fall during the next. Such variations are to be considered in the context that the earlier enumerations included other

allied linguistic groups like Urdu etc. within Hindi, but in the latter enumerations they have been shown separately.

Linguistic categorization of mother-tongues

In the Census of 1961, people belonging to as many as 47 mother-tongue groups were enumerated in the district, of which 7 were neither classified by Grierson earlier in his Linguistic Survey of India, nor could they be classified by the Census authorities. Seven other language groups related to countries beyond the Indian sub-continent. Some languages, namely Bhopali, Rajputani, Malpaharia, Ho and Mech had only one or two speakers in the district.

Languages and dialects of several branches of the Indo-Aryan family are spoken in the district. Of the Eastern group, Bengali is naturally predominant there being speakers also of Oriya (25,957), Assamese (986), Magahi (267), Maithili (58), Bhojpuri (14) and Sadani (12). In the Census of 1961, Malpaharia (1 speaker) was grouped with Bengali. Of the Southern group, speakers of Marathi and Konkani numbered 660 and 5 respectively. Goanese, which may be the same as Konkani, returned 2 speakers in the Census of 1961. Of the Central group, Hindi and Urdu are preponderant and have been dealt with separately. Speakers of other languages of this group are: Gurmukhi (3,559), Gujarati (514), Marwari (495), Panjabi (301) and Rajasthani (145). In the Census of 1961, Nagari-Hindi (30 speakers) was grouped with Hindi. Of the Himalayan group. Nepali and Garhwali claimed 3,514 and 16 speakers respectively in the district. Of the North-western group, only 18 speakers of Sindhi and of the Dardic group no more than 5 speakers of Kasmiri were enumerated in 1961.

Of the Dravidian language family, Telugu (9,356 speakers), Tamil (2,226), Malayalam (168) and Kannada (49) were spoken in the district. Two tribal dialects, Kurukh and Malto belonging to the same language family, returned 461 and 1 speakers respectively.

Speakers of several tribal dialects, namely Santali (1,610), Munda (324), Kora (6) and Ho (1) of the Austric language family were also to be found in the district.

Only 2 female speakers of the Mech dialect of the Bodo-Naga group of the Sino-Tibetan language family were spotted in the district during the Census of 1961.

In course of the same enumeration, 1,134 English-speaking persons (645 males and 489 females) were counted in the district while the number of persons speaking Pashto, Chinese and Persian did not exceed 25 each.

The Bengali mother-tongue group

The Bengali language has two literary forms— the standard literary and the standard colloquial. The latter was the colloquial dialect of the educated middle classes of Calcutta and its environs including Howrah which has now become the standard colloquial literary form

throughout the State. Specimens[1] of this language are cited below: (1) *Bengali Sādhu Bhāshā or standard literary Bengali* "ēk byakti-r (=bekti-r) dui-ṭī putra chila. tan-madhyē kaniṣṭha putra pitā-ke kahila—pitaḥ, sampattir yē (=jē) aṁśa āmār haibē, tāhā āmā-kē diun. tāhā-tē tini āpan sampatti tāhā-digēr madhyē bhāg (banṭan) kariyā dilēn." (2) *Bengali Chalit Bhāshā or the standard colloquial language current in Calcutta and surrounding areas* "ēk-jan lōk-ēr du-ṭi chēlē chila. tādēr madhyē chōṭō-ṭī bāp-kē ba'llē—bābā, āpnā-r biṣay-ēr madhyē yē (=jē) bhāg āmi pābō, tā āmā-kē din. tā-tē tā-dēr bāp tā-r (nij-ēr, āpnā-r) biṣay-āśay tā-dēr madhyē bhāg—ka'rē (bēṭē) dilēn (dilē)."

"The Bengali-Assamese-Oriya group possesses in common some special affixes. The genitive affix for the noun has -r (Bengali -er, -r and -kār, Assamese -ar, Oriya -ara, -kara), and the temporal bases of the verb show -il- for the past and -ib- for the future. The other three Eastern speeches (Maithili, Magahi, Bhojpuri) also show -r and -kar for the genitive of the pronouns, but it is -k, -kē for the noun, and -al-, -ab- (instead of -il-, -ib-) for the verb. The Bihari speeches as well as dialectal Bengali also have an affix -t- for the future tense of the verb in some cases."[2]

The Hindi mother-tongue group

Hindi speakers are the next largest group in the district. In 1961 Hindi (including Nagari-Hindi) and Maithili speakers numbered 1,81,167 and 58 respectively while Bihari, Magahi and Bhojpuri had no speakers at all in Howrah district. The observation of Dr. Chatterji to the effect that: "The Bihari speeches. Bhojpuri and Magahi as well as Maithili, have now been reduced to the position of patois dialects as their speakers have accepted Hindi as their language of educational and public life"[3] is corroborated by these population figures. About this eclectic Hindi language the following lines of Dr. Chatterji are worth quoting: "The importance of Standard Hindi, or the Khari-Boli (both as High Hindi and Urdu), is recent—beginning from the middle of the 18th century. and this gained great strength from the second half of the 19th century. Formerly, this speech, originally belonging to the city of Delhi, had no importance in literature throughout the area where it is now dominant: the Kosali or Awadhi dialect on the one hand, and the Braj-bhakha dialect on the other, and certain Rajasthani dialects in Rajasthan, were the literary languages. But now the Standard Hindi (Khari-boli) has become the channel, so to say, of all literary life from Western Panjab to Bihar and from the Himalayas to the Maratha country and Gujarat."[4] The speakers of this language are heavily concentrated in the urban and industrial areas of Howrah and Baly. Their

[1] Suniti Kumar Chatterji—Languages and Literatures of Modern India. Calcutta, 1963. p. 73.
[2] op. cit. pp. 38-9.
[3] ibid. p. 337.
[4] op. cit. p. 42.

sexwise distribution reveals the non-permanent character of their residence in the district; there are 1,34,658 male Hindi-speakers forming 74.3% of the total Hindi-speaking population while Hindi-speaking females number only 46,509.

As regards the growth of popularity of Hindi in this region, Dr. Chatterji observes: "In Calcutta, towards the end of the 18th century, the English realized the value of this great North Indian speech, which, in both of its forms Hindi and Urdu, was already established in Calcutta and Murshidabad and Dacca and other places in Bengal through the presence of Muslim noblemen, Panjabi and Rajasthani (Hindu or Jain) merchants and bankers, Bihari soldiers and working classes and others. To teach Indian languages to young Englishmen who came to administer the country during the East India Company's rule, the College of Fort William was opened in Calcutta in 1799 and provision for teaching this North Indian Language in its two forms was made. Books were encouraged to be written in both forms, and in this way a great impetus was given to Hindi or Hindustani literature, both as High Hindi and Urdu in Calcutta from 1800."[1]

As regards the numerical growth of the Hindi-speaking population in the district, we find that in 1901, there were 85,490 of them forming 10.05% of the district population whereas in 1911 the corresponding figures had increased to 1,20,097 and 12.73% respectively. In 1921 these figures came down to 1,10,706 and 11.10% respectively but in 1931 there was an increase in absolute figures to 1,12,501 but the percentage dropped to 10.24. Further decrease was recorded in 1951 when there were 83,567 Hindi speakers who formed 5.19% of the total population of the district. In 1961, however, the corresponding absolute and percentage figures were 1,81,197 and 8.89% respectively. The decrease in percentage figures from 10.05 in 1901 to 8.89 in 1961 may be accounted for by the fact that the earlier Censuses included in the Hindi group several dialects close to it while in 1961 the said dialects and Urdu and Hindusthani were shown separately.

The Urdu mother-tongue group

In 1961 Urdu speakers in the district numbered 62,973 forming 3.08% of its total population. Of them 41,115 or 65.2% were males and 21,858 or 34.8% were females. The Muslims, generally using this language elsewhere, however, numbered 3,33,481 forming 16.4% of the total population. This discrepancy can only be explained by the fact that a large number of local Muslims have not returned Urdu as their mother-tongue as they are born and brought up in the district and use Bengali as their mother-tongue. By and large, Urdu is the mother-tongue of Muslim immigrants from Uttar Pradesh and Bihar who are mostly engaged in varied industries and trades in the urban sector.

About Urdu Dr. Chatterji observes: "Through the English ad-

[1] op. cit. p. 51.

ministration, Urdu, as a legacy of the last years of the Mogul rule, was established as the language of the law courts throughout the Panjab (after it was conquered in 1848) and United Provinces (Uttar Pradesh) and Bihar. In the English schools which were open in these areas, leading up to the Universities when they were established in 1857 in Calcutta and Bombay and Madras, and professional or technical institutions for legal, engineering and medical studies, as well as in the British Indian Army, it was the Urdu form of Hindustani which was first established, and Hindi came in much later. Most educated people with some English education, right down to the beginning of the 20th century, in Bihar, in Uttar Pradesh and in the Panjab, were educated in Urdu and not in Hindi. Side by side, a few Hindus began to cultivate the native or Sanskritized form of the language, particularly from the last two decades of the 19th century. Thus the same single speech became split up into two, during the 18th-19th centuries particularly. But between them, they only strengthened the position of the basic Midland Speech, Hindustani, throughout the whole of Aryan India, in spite of their mutual antagonism."[1]

The Oriya mother-tongue group

According to the Census of 1961, Oriya is the mother-tongue of 25,957 persons, accounting for 1.2% of the district population. Most people of this group are relatively non-permanent immigrants as is evident from the fact that 21,873 or 84.2% of them are males and only 4,084 or 15.8% are females. In 1901 the sex composition was 8,167 males and 132 females. During the 60-year period from 1901 to 1961, the Oriya-speaking population in the district has grown by as much as 212.8%.

The Nepali mother-tongue group

In the Census of 1961, Nepali returned 3,514 (2,452 males and 1,062 females) speakers, constituting about 0.1% of the district population. During the same enumeration, 3,537 persons were counted as immigrants into the district from Nepal and the discrepancy in these two populations cannot be readily reconciled. As there were only 53 Nepali-speakers in the district in 1901, the growth of this linguistic community over the 60-year period from 1901 to 1961 has been phenomenal indeed. They are mostly employed in the urban areas as watch-and-ward men in industries and as policemen

Bilingualism: among the Bengali mother-tongue group

According to the Census of 1961, 1,06,547 persons or 6.1% of the total Bengali-speaking population of the district know a subsidiary language. 5.2% are conversant with English and among this group 86% are males and only 14% females. 9,454 or 0.5% of the Bengali-speaking population know Hindi and among them 7,604 persons or 80% are males and the rest females. Urdu is the subsidiary language of 3,931 Bengali-speaking persons, Arabic of 1,719 persons and Persian of only 7 persons.

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[1] ibid. p. 52.

15,600 Hindi-speaking persons constituting 8.6% of the total Hindi-speaking population of the district know a subsidiary language. Of them 8,739 (6,727 males and 2,012 females) speak Bengali, 5,236 (4,810 males and 426 females) speak English and 1,587 (1,303 males and 284 females) speak Urdu as their subsidiary languages.

Among the Hindi mother-tongue group

10,922 Urdu-speaking persons constituting 17.3% of the total Urdu-speaking population of the district speak a subsidiary language. Of them 5,081, 4,376 and 1,318 persons respectively speak Bengali, Hindi and English as their subsidiary languages.

Among the Urdu mother-tongue group

Immigrant tribals like the Santals, Oraons, Mundas have their own distinctive dialects. For the sake of their day-to-day contacts with other linguistic groups they have to learn a subsidiary language like Bengali or Hindi. It may not be ruled out that some of these Mundas and Oraons may have forsaken their mother tongue altogether and adopted Sadani, a curious mixture of Bhojpuri and Chattisgarhi, as current among their brethren in the Ranchi district of Bihar or among the tribals of the Sundarbans or the Tea districts of North Bengal. In the Census of 1961, 12 persons were found speaking Sadani as their mother-tongue who had no knowledge of any other subsidiary language. It may be that these Sadani-speakers are tribals who have adopted a non-tribal language and who have been heading towards acculturation with the non-tribal society. But Santals seldom forsake their mother-tongue. In 1961, 228 Santals or 14.2% of the total Santali population (1,610) of the district knew a subsidiary language. Of them 217 persons knew Bengali and 5 spoke Hindi. Among the Oraon mother-tongue group only 60 persons, constituting 13% of the total Oraon-speaking population of the district, spoke a subsidiary language. Of them 35 spoke Bengali and 24 Hindi. Only 16 persons, constituting 4.9% of the total Munda population of the district, had a subsidiary language according to the Census of 1961 Of them 13 knew Hindi and 2 knew Bengali.

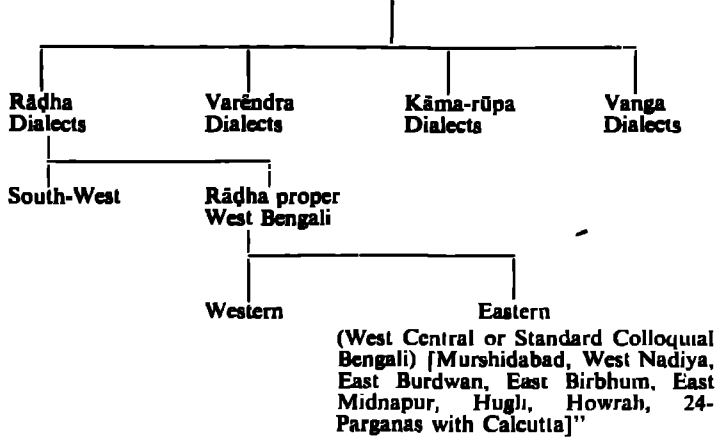
Bilingualism among the tribal people

According to Grierson, Bengali spoken in the district belongs to the Western Branch of the language and is the central or standard form of colloquial Bengali "The Central Dialect of Bengali, as spoken by the educated classes, is that usually taken as the standard of polite conversation. ... It is the language of the town of Calcutta and of the districts of the 24-Parganas, Nadia, Murshidabad, Hooghly and Howrah."[1]

Bengali dialect as spoken in the district

As has been classified by Dr. Sunitikumar Chatterji, the Bengali dialect spoken in the district falls within the south-eastern part of the Southern Rāḍha country. "The speech of the upper classes in the western part of the Delta and in Eastern Rāḍha gave the literary language to Bengal, and now the educated colloquial of this tract, especially of the cities of Nadiya and Calcutta, has become the

[1] G. A. Grierson—Linguistic Survey of India, Vol. V, Indo-Aryan Family, Eastern Group, Part I. Calcutta, 1903. p. 37.

standard one for Bengali, having come to the position which educated Southern English now occupies in Great Britain and Ireland."[1]

"The more important points of divergence among the various groups of Bengali are noted here.

"Phonetic:...East Rāḍha, the Standard Colloquial, has advanced more than any other dialect in effecting a total change from the common Bengali type by introducing largely the habits of mutation, vowel harmony etc. *e.g.* East Rāḍha ক'রে, কোরে (kore), রেখে (rekhe), দিশি (diʃi), বিলিতি (biliti)=Typical East Bengali (kòira. raikha, deʃi, bilati), respectively *having done*, *having kept*, *native*, *European*. ...The stress system in West Central Bengali is predominantly initial, both in words and phrases. This results in the dropping of vowels in unstressed medial syllables, and thus in shortening of the forms of words (*e.g.*, West Bengali কষ্টী পাথর (koʃṭi pāthor) *touch stone*=North and North Central Bengali কষটী (kaʃəṭi) from Old Bengali (kaʃə:ṭi)= Middle Indo-Aryan. ..."

Morphological: East Rāḍha, i.e. the dialect of Hooghly (and neighbouring districts) has the common Bengali plural affix গুল <gulá <kula> in the form of গুনো <guno>, as against গুলাক <gul-ā-k> of western Rāḍha."...The post-positions are numerous, and each group shows its special predilections: *e.g.*, Rāḍha would prefer সঙ্গে <sàngē> meaning *with*, but Vanga সাথে <sāthē>,... In conjugation,...The past first person affix <-(i) lum, -lŭ, -ilō̆> is found in Rāḍha . . . the Vanga form <-ilām> has been adopted in the 'Sādhu-bhāṣā,' and <-ilām> -ilem> has been super-imposed on most dialects, including even the West Central (*i.e.*, Standard Colloquial) Dialect. In the formation of the compound tenses, the pro-

[1] Suniti Kumar Chatterji—The Origin and Development of the Bengali Language, Part I. Calcutta, 1926. pp. 139-42.

gressive tenses show a difference in Rāḍha and Varêndra on the one hand, and in Vanga on the other: the latter formed it with the present participle in <-itē> + the verb substantive, whereas in the former, it seems to be made, not with the <-ite> participle, but with a different verbal form + the verb substantive; *e.g.*, literary Bengali চলিতেছে (in prose) <cȧlitē -chē>, চলিছে (in poetry only) <cȧli-chē>, both meaning *is walking*, = Rāḍha dialects, 'South-West Bengali,' West Rāḍha, and East Rāḍha, respectively (c̃ol-ṭhe, c̃ȯl-c̃he, c̃ol-c̃e), Varêndra (c̃ɔl-se), which are forms without <-itē>;"[1]

"Dialectal sounds of New Bengali: The more important sound of dialectal Bengali may be noted. (Ɛ): -half open front vowel, intermediate between (e) and (æ) of Standard Bengali, is found in the East Bengali dialects, as well as in the Bengali of the extreme west."[2]

"Dipthongisation from Epenthesis: Middle Bengali <āŭ, āŭ > āĭ> is found as <āu, āi> when occurring finally in New Bengali, and it is contracted to <ā> in West Central Bengali, when closed by a consonant, *e.g.*, লাউ <lāu> (alābu), আই <āi> (āu, āyuṣ),... <āi, āu > āi> in the body of a word extended by an affix is found as <ē> in West Central Bengali, *e.g.*, in forms like মেসো <mēsō> *husband of mother's sister*, Middle Bengali মাউস্‌আ, মাইস্‌আ, <māusuā > māisuā>, from মাউসী <māusī> = New Bengali মাসী <māsī> (mātṛ-ṣvasṛ-). ...It seems that in West Central Bengali, especially round about Calcutta, Hugli, etc., just as in the Late Medieval Bengali, the normal change of Middle Bengali <āi>, as well as of <āi < āu>, when this <āĭ> was not final (*i.e.*, when it was closed by a consonant or was in the middle of the word), was to an <ē>. This is closely connected with umlaut in this dialect. But influence of other dialects, and especially of the literary language, prevented a wholesale contraction of <āi> to <ē>, in the speech of the upper classes at least. Thus, we have পেলে <pēlē> *obtained*, খেলে <khēlē> *ate*, এলুম also এলাম <ēlum, ēlām> *I came*, এলো <ēlō> *he came*, also এলো <ēlō> *dishevelled* etc. (respectively = Literary Bengali পাইল <pāilȧ>, খাইল <khāilȧ>, আইলাম or better আসিলাম <āilām > āsilām>, আইল or better আসিল <āilȧ, āsilȧ>, and Medieval Bengali আইলা, আউলা <āilā, āulā>): these have become the accepted forms in the colloquial when it is used in writing. If we have চার <cār> *four* < চাইর <cāir>, রাত <rāt> *night* < রাইত <rāit> etc.,... as the ordinary forms in West Central Bengali,—in the genitive, or instrumental-locative, with the এর <-ēr> and এ <-ē> affixes respectively, the <ā> in these words is changed to <-ē>: *e.g.*, চেরের পাঁচ <cērēr pāc> *4/5ths*; রেতের বেলা <rētēr bēlā> *night time* etc. ...In the speech of the lower classes in the West Central Bengali area, the <ē> forms have greater vogue. Thus we hear এসে <ēsē> *comes*,

[1] ibid. pp. 144-5.
[2] ibid. p. 269.

for the educated আসে <āsē> = Medieval Bengali আইসে <āisē> (āviśati)."[1]

"Mutation without Epenthesis: The system of altering between high and low vowels of the same class through influence of following ones is a remarkable thing in New Bengali phonology, especially in West Central Bengali: *e.g.*, (e) with (a, e, o) in the next syllable is lowered to (æ): দেখে <dēkhē> *he sees* is pronounced (dækhe), but দেখিয়া > দেখে <dēkhiā>dēkhē> *having seen* is (dekhe), the influence of the (i) preventing a lowering of (e) to (æ)."[2]

"New Bengali Dialectal Forms For The First Person:

"East Rāḍha (Standard Colloquial) also Varēndra (North Central):

Nominative আমি āmi—আমরা ām-rā
Genitive আমার āmā-r—আমাদের āmā-dēr
Dative আমাকে āmā-kē, আমায় āmā-y < āmā-ē
— আমাদের āmā-dēr, আমাদিকে āmā-di-kē
Locative আমায় āmā-y, আমাতে āmā-tē,
আমাদিগেতে āmā-digē-tē আমাদেরতে āmā-dēr-tē, etc."[3]

Scripts used

The evolution of the Bengali and Nagari (Deva-nagari) scripts, which enjoy, in that order, the topmost popularity in the district, is best described in the words of Dr. Suniti Kumar Chatterji: "Leaving aside the scripts of foreign origin, e.g., the Perso-Arabic and the Roman or Latin, India now lacks unity of script. There are some seven or eight distinct scripts now current in India, which, one must hasten to add, are all of native Indian origin, all based on the same principles, and all forming but diverse styles of the same single system of writing. These are Nagari (or Deva-nagari), Bengali-Assamese, Oriya, Gurmukhi, Telugu-Kannada, Tamil-Grantha, and Malayalam. . .

"All these alphabets are ultimately descended from the Brāhmī script of ancient India, which was a pan-Indian, a sort of National Indian Alphabet in the centuries immediately before Christ and after. This Brāhmī alphabet was believed to have been created out of the Semitic (Phoenician) system of writing by Indian merchants, several hundred years before Christ. One recent view, however, is that it was derived, probably in the 10th century B.C., from the pre-Aryan script as used at Mohen-jo-Daro and Harappa and other ancient pre-Aryan cities in Panjab, Sindh and other areas, and was adapted for the needs of the Aryan language (Vedic Sanskrit). In any case, there was this script which became an all-India system several hundred years before Christ. It went on changing century by century, but there was a general uniformity of script up to a few centuries after Christ. ...The last evolution of Brāhmī in North India gave rise to three distinct groups during the closing centuries of the first

[1] Ibid. pp. 385-6.
[2] ibid. p. 396.
[3] ibid. p. 815.

millennium A.D. viz., the Sāradā, Gurmukhī, the Bengali-Assamese-Maithili-Newarī-Oriya, and the Nāgarī or Dēva-nāgarī. Except for Oriya, the current form of which script is based on manuscript handed from the 15th century onwards, these became more or less differentiated round about 1000 A.D. ...

"Although from the same source and following the same system, the shapes of the letters in these various Modern Indian Alphabets have become rather different from each other, and each has to be learnt separately, though of course the basic points of agreement or resemblance among all these are there, and these are frequently quite easy to notice. The Nāgarī is the script used by the largest number. It is employed not only to write Hindi and all the speeches and dialects which have now come within its orbit (e.g. Maithilī), but also Marathi and Nepali, and frequently, Panjabi and Gujarati. It is being adapted for Sindhi also. Sanskrit has always been written in the various provincial scripts. But, now, since the foundation of three Indian Universities of Bombay, Calcutta and Madras in 1857, the Nāgarī has been accepted as the pan-Indian script for Sanskrit. . . . Often the historical perspective is lost sight of, and many good people imagine that the Dēva-nāgarī script is the only script proper for Sanskrit. This new outlook is of course recent, and unhistorical; people ordinarily have no idea of the Brāhmī and its latter developments which are behind the Nāgarī, Bengali, Grantha-Tamil, and the rest. . . .

"But the Nāgarī, with most of its sister Indian scripts (including Bengali—Ed.), has certain disadvantages. It is . quite a complicated script, both in the shapes of its letters and in some of its principles. There is one great factor in favour of the Nāgarī and other Indian alphabets connected with it (including Bengali—Ed.): it is the scientific scheme of the alphabet—the arrangement of its letters on a strictly phonetic basis. In the system of the Indian alphabet, vowels and consonants are not jumbled together without any thought of arrangement, as in the Roman or Arabic alphabet. We have here first the vowels, as they occurred in Old Indo-Aryan Sanskrit (a ā, i ī, u ū, ṛ, ḷ, ē ai, ō au, with the unvoiced breathing and the nasalized continuation of a vowel, ḥ, ṁ, besides the two vocalic consonants ṛ and ḷ, short and long); and then come the consonants arranged according to the points of articulation from the throat outwards (gutturals—k, kh, g, gh, ṅ; palatals—c, ch, j, jh, ñ· cacuminals—ṭ, ṭh, ḍ, ḍh, ṇ; dentals—t, th, d, dh, n; labials—p, ph, b, bh, m), followed by the Semi-vowels and Liquids (y, r, l, v) and the Sibilants and the Aspirate (ś, ṣ, s, h).

"The Indian system of writing is in principle strictly alphabetical, and phonetic; but in its application, it is syllabic. The vowels, when they come after a consonant, are just contracted into small signs which are tagged on to the preceding consonants; and two or more

consonants coming together without a vowel in between are combined into complicated ligatures, in most of the alphabets now current, in which the component consonants frequently occur as fragments of the original letters. These ligatures and other modifications bring up the total number of separate types to print the Nāgarī to some 450 or more separate type items, although the simple vowels and consonants in isolation mumber only 48."[1]

RELIGION AND CASTE

The Census of 1961 enumerated 8 religious groups (whose population strengths are given within brackets) in the district, namely Hindus (16,98,306), Muslims (3,33,481), Christians (3,170), Sikhs (2,853), Jains (402), Buddhists (194), Brahmos (63) and Zoroastrians (8). Except the Hindus, Muslims and Brahmos, the other religious groups live mostly in the urban areas. The following table gives the subdivision and thanawise distribution of persons belonging to the Hindu, Muslim and Christian faiths according to the Census of 1961.

SUBDIVISION & THANAWISE DISTRIBUTION OF PERSONS BELONGING TO MAJOR RELIGIOUS COMMUNITIES IN HOWRAH DISTRICT: 1961

District/ Subdivision/ Police Station	Hindus		Muslims		Christians	
	Persons	Percentage of total	Persons	Percentage of total	Persons	Percentage of total
Howrah District	16,98,306	83.31	3,33,481	16.36	3,170	0.15
Sadar Subdivision	9,95,858	84.78	1,72,617	14.69	2,949	0.25
Baly	1,40,410	90.94	12,013	7.78	541	0.35
Howrah city	4,50,818	87.94	58,543	11.42	1,637	0.32
Sibpur (outside Howrah city)	358	95.72	16	4.27	—	—
Jagachha	49,374	86.61	6,944	12.18	554	0.97
Sankrail	98,037	78.57	26,319	21.11	187	0.15
Panchla	62,326	66.99	30,698	33.00	—	—
Jagatballavpur	85,801	81.39	19,613	18.61	—	—
Domjur	1,08,734	85.48	18,411	14.47	27	0.02
Uluberia Subdivision	7,02,448	81.31	1,60,864	18.62	221	0.02
Uluberia	1,44,711	71.45	57,682	28.47	173	0.08
Bauria	30,289	72.84	11,039	26.79	22	0.05
Syampur	1,47,342	86.00	23,984	14.00	—	—
Bagnan	1,30,776	83.77	25,301	16.21	2	—
Amta	1,70,733	82.30	36,677	17.68	23	0.01
Uday Narayanpur	78,597	92.60	6,281	7.40	—	—

[1] Dr. Suniti Kumar Chatterji—The Languages and Literatures of Modern India. Calcutta, 1963. pp. 64-7.

Hinduism

Of the district population of Hindus in 1961, 9,82,182 lived in rural and 7,16,124 in urban areas. In 1901, in a population of 8,50,514 in the district, 6,72,544 or 79.07% professed the same faith. In 1951, 13,44,616 persons, constituting 83.4% of the district population, were Hindus. The overall population of the district during the 1901-1951 period grew by 89.5% while the Hindu population over the same period grew by 99.9%. During the decade 1951-61, the percentage of Hindus in the district population remained almost steady; in 1951 it was 83.4 and in 1961, 83.3. The general population during the same decade grew by 26.5% against a growth of 26.3% in the Hindu community. Since the Census of 1961 does not show any person belonging to a tribal religious group, it is most likely that all the tribals of the district returned themselves as Hindus following the practice of their brethren in many other districts. In no police station of Howrah Hindus constitute less than 71% of the thana population; the percentage is highest in Uday Narayanpur P.S. (92.6) and lowest in Panchla P.S. (66.99).

Major sects and cults

The cult loyalty of the Bengali Hindus, especially in the urban areas and among the well-to-do in the rural areas, depends largely on personal preference. Different members of the same family may worship divinities of varying cults. They generally believe in the supremacy of a number of major godheads of the Brahminical Hindu faith together with a few cultheads included in the Hindu pantheon. The district being located in the south-western part of the ancient Rāḍha country, the deities which once flourished there still attract wide veneration. A few local gods and goddesses of folkish character which are worshipped in southern Bengal stretching from the Sundarbans to south Midnapur are also held in high religious esteem. It is not unreasonable to suppose that in the past when the lower stretch of the Bhagirathi was not so important as at present and when the vigorous course of the Saraswati passed through Hooghly and Howrah districts and then through the channel of the Adi Ganga in 24-Parganas, the southern parts of Howrah and 24-Parganas were geographically alike where the worship of similar folk gods and goddesses thrived.

Sakti cult

Through the worship of Sakti or the mother principle—a major cult of the Rāḍha region—the district maintains close contact with one of the basic trends of the Brahminical Hindu religion. Sakti is conceived as the divine mother and the female consort of Siva, the supreme creator. Among the common people, Sakti is often the presiding deity of fertility cults of folkish origin. The goddess is worshipped in several forms in the district, namely Raksha Kali, Smasan Kali and others. The large image of Kali annually worshipped at the Jatadhari Park of Salkia, along with variant images of the same godhead worshipped every year at Birampur in Bagnan P.S., Khariberia, Nehala and Sasuli in Syampur P.S. and the fairs on the

occasion of Kali puja at Tulsigarh in Uluberia P.S., Ganga puja at Chandipur in Uluberia P.S., Dingakhela and Sibganj in Syampur P.S., and Durga puja at Harispur in Amta P.S. are important instances of Sakti worship in the district.

Chandi, a Sakta deity

The district abounds in Chandi, a Sakta deity of supposedly non-Aryan origin having references in the Purana. In the northern parts of the district she is seen in many villages in the form of folk-goddess. It is peculiar that her worship predominates in areas close to the rivers which were once active but have now silted up. Dr. Asutosh Bhattacharya supposes the word 'Chandi' to be of Austric or Dravidian origin, and refers to Sri S. C. Roy to prove the similarity between the Chandi of the Oraons of Chotanagpur and the Chandi of Bengal.[1] In the Howrah district there are Kalyanchandi (worshipped by archers), Mangalchandi (of tradesmen), Makalchandi (of fishermen), Somaichandi or Samichandi (of betel-leaf cultivators and traders). Besides, there are Chandis connected with different diseases, namely Olaichandi (goddess curing cholera) and Basantachandi (same as Sitala and curing small-pox). Melaichandi, Makarchandi, Betaichandi, Joychandi, Gaḍchandi, Dakaichandi, Biraichandi, Birkulchandi etc. are other variations[2] No other district in West Bengal shows such a varied worship of this deity under so many different appelations.

Of the most popular Chandis in the district mention may be made of Melaichandi at Amta, Makarchandi at Makardaha and Olaichandi at Kasundia within Howrah city, the latter worshipped not in a temple but on an erected platform by a Muslim Fakir.[3] That Chandi now embraces the attributes of other gods and goddesses of the Hindu faith is evident from the image of Gaḍchandi of Raspur in Amta P.S. which looks like that of Durga with two hands. Many gods and goddesses, namely Sasthi, Dakshin Roy, Panchanan, Manasa, Sitala etc. are usually seen seated with her.

Bisalakshi or Basuli

In many riparian villages of the district seats of the goddess Bisalakshi (who has many variant names) are to be found.[4] In the village of Ratanpur in Syampur P.S. she is called 'Ratnamala'. She has ten hands and is seated on a tiger which suggests that she might have been conceived here as a silvan deity.[5] In some other places she has four hands. Where she is not represented by an earthen image, a piece of stone is worshipped instead. She is worshipped by fishermen and honey-collectors. Fishermen and people belonging to the Rajbansi or Tiyar castes worship her with great eclat before starting on fishing expeditions.

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[1] Asutosh Bhattacharya—*Bāṅglā Maṅgalkāvyer Itihās* (in Bengali). 3rd Edn., Calcutta, 1958. p. 327.

[2] Tarapada Santra—*Howrah Jelār Lōk-Utsav* (in Bengali). Howrah, 1369 B.S. p. 36.

[3] Gopendrakrishna Basu—*Bānglār Laukik Devatā* (in Bengali). Calcutta, 1966. pp. 27 & 188.

[4] Tarapada Santra—op. cit. p. 33.

[5] ibid. p. 34.

"In different villages of Southern Bengal Bisalakshi is represented by a figurine sitting on the back of a tiger, and accordingly like Dakshin Roy, she is sometimes also known as the goddess of tigers."[1] The worship of Bisalakshi as a tiger-goddess both in South 24-Parganas and Howrah confirms our earlier suggestion that these two districts formed one geographical and cultural unit in the past. Bisalakshi (also known as Basuli or Bansuli), a manifestation of the Sakta mother principle, though metamorphosed to a deity of the Brahminical Hindu religion, is essentially a folk-goddess. She is not mentioned in any of the early Hindu texts. It seems likely that she was originally worshipped by low-caste people but by virtue of her popularity, she came to be included in the Brahminical Hindu pantheon like Kali, Chandi, Manasa, Sitala and Sasthi.[2]

Sitala

Sitala, a very common folk-goddess of the district of non-Aryan origin, has her incantation recorded in the *Skandapurāṇa*. It is supposed that she was taken into the Hindu fold at a later date. As the controlling deity of small-pox, she seems to be of indigenous origin in a hot tropical region,[3] having no reference in early religious texts. Sri A. Bhattacharya has traced similarities between Sitala of Bengal and certain folk-goddesses of South India.[4] In Howrah district the worship of this deity, also called 'Basantachandi', is fairly widespread. Generally, she has no temple and is worshipped under a tree. In many places a symbolic pot or a piece of stone is worshipped in her name. Elsewhere her earthen image shows her seated on an ass, carrying a broomstick in one hand and a pot in the other with a winnowing fan on her head. Songs composed by a local poet of Midnapur are sung by professional singers on the occasion of the annual worship of Sitala at various places in Howrah district.[5]

The cult of Siva

Siva is the most popular of the pre-Vedic gods included in the Hindu pantheon. The Vedic 'Rudra' was essentially non-Aryan in his ferocity and might have imbibed at a later date the qualities of the Buddha to become the calm and sober Siva as we find him today. The idea of mixed characteristics of Siva, both fierce and friendly, took shape in the Puranas from which the idea of the present-day Siva spread in Bengal. Because of his benign qualities Siva became a very popular god among the common people. In the medieval Sivayan Kavyas written in honour of Siva, he is treated as a benign god who has the power of fertilizing the earth. In the *Manasā*, *Chandī* and *Annadā-Mangal Kāvyas* extolling the supremacy of the mother principle, Siva is represented either as a reluctant peasant or as an inefficient head of a big family, ascribing thereby folk characteristics to him in the perspective of the Bengal village. Traces of the Puranic

[1] A. K. Das & M. K. Raha--The Oraons of Sundarban. Calcutta, 1963. p. 267.
[2] Gopendrakrishna Basu—op. cit. pp. 50-51.
[3] Asutosh Bhattacharya—op. cit. pp. 693-4.
[4] ibid. p. 697.
[5] Tarapada Santra—op. cit. pp. 51-2.

concepts of Siva as the creator or the *Yogi* are noticeable in the above types while as Mahakal or Bhairab a semblance of the distant Rudra is manifest. Iconographically, all these different aspects of the deity are not reflected in its image as everywhere in the district Siva is represented by the *liṅga* or the phallic symbol.

Siver Gājan or *Nīler Gājan*, held at the end of the Bengali year, is the main festival associated with Siva. It symbolizes the marriage of Siva with his consort on the occasion of which the assembled devotees are treated as belonging to the marriage party. Various physical mortifications, like piercing the skin with sharp spikes (বাণ ফোঁড়া) or walking on burning charcoal (*āgun-sannyās*) are also practised by the devout, drawn mostly from the so-called lower or untouchable castes. Hook-swinging once formed the most important item of these self-abnegation rites but it has been legally banned long ago. These practices show traces of very old rituals. *Chaḍak* and *Gājan* festivals are celebrated all over the district, particularly in the Amta and Bagnan thana areas.

The *Sivarātri* or *Siva Chaturdasi* festival held on the 14th day of the new moon in the Bengali month of *Phālgun* (February-March) is another popular festival associated with Siva. On this occasion unmarried girls fast and perform rites to be blessed with tolerant husbands like Siva and married women to the same in expectation of getting good children. A big fair, lasting for 7 days, is held on this occasion at Sidheswar in Jagatballavpur P.S. At Bagandaha in the Syampur thana a similar festival for a day takes place every year. At Gaḍ Bhabanipur in Uday Narayanpur P.S., where the Bhursut royal family had its seat in the past, special worship of Manmath Siva in the local temple dedicated to him is held on the last Sunday of the Bengali month of *Srāvan*.

Panchanan

Panchanan or Panchu Thakur, though a folk-god, is taken for Siva in many places. But in Howrah district Panchu Thakur retains his folk qualities as is evident from his look, and from the capabilities attributed to him. At Jaypur[1] in Amta P.S. he is seated with a fierce look on the back of a horse and is called Panchananda. The Panchanantala locality of Howrah city derives its name from another Panchananda seated on a horse and housed in a temple. At Golpara in Syampur P.S. Panchananda is worshipped for a day in April every year. At Narna in Domjur P.S. and Sasati in Syampur P.S. there are temples of Panchanan Thakur. This folk-god looks after the welfare of children. Those of them for whose welfare promises are made to Panchu or Panchananda are also named after him.[2]

Dakshin Ray

Dakshin Ray, the god of tigers and a popular deity of southern 24-Parganas is also worshipped in many places in Howrah district. In the temple of Gaḍchandi at Raspur in Amta P.S. Dakshin Ray

[1] Benoy Ghosh—*Paschim Baṅger Saṁskriti* (Bengali). Calcutta, 1957. p. 596.
[2] Gopendrakrishna Basu—op. cit. p. 31.

is seen seated along with the presiding deity.[1] At Sasati in Syampur P.S. he accompanies Panchananda and other folk gods and goddesses in the same temple. It seems to be a common practice in the district to place Dakshin Ray with other deities in the same shrine. At places he is called 'Jātāl' Thakur. In Ambere, a village in Syampur P.S., he stays in a big brasspot, which has the shape of a miniature Buddhist *Chaitya*.[2] That this folk god was worshipped in the district at least two centuries ago is evident from Dwija Harideva's *Rāymangal* (1127-32 B.S.) in which the following line occurs: *Jhorhāṭe Bandilām Rāyer Charaṇ*[3] (I worshipped Ray at Jhorhat). In Bhursut Raj family, there was a king named Dakshin Ray.

The cult of Dharma

Originating among the pre-Aryan and pre-Dravidian people of the Rāḍha region in ancient times, the cult of Dharma appears to have attracted Hindu and Buddhist influences on it at a later date.[4] The worshippers of this deity are drawn from all Hindu castes, high or low. Haraprasad Sastri allied Dharma with Buddha. S. C. Roy connected it with Surya, the Hindu sun-god. Dharmaraj is also the name of the god of death. Prof. Sunitikumar Chatterji suggested that Dharma was the Sanskritized form of an old Austric word for tortoise. But Dharma became allied with the tortoise only under the influence of the Hindu Puranas. It is, however, a peculiarity of the god that he is mostly worshipped by priests of the Dom caste. Generally, the deity has no image; a piece of stone usually stands for it and nails pricked on the stone are taken as the eyes. At Gaḍ Bhabanipur in Uday Narayanpur P.S. the festival of Dharma attracts a big crowd. The custodian of the temple is a Mahishya by caste and the priest is a Mahishya Brahmin. At Sonatala on the bank of the Damodar there are two Dharma Thakurs. A Dom is the priest in one case, and in the other the priest is a Mahishya. At Khalor in Bagnan P.S. there are several tortoise-shaped Dharma images in a temple by the main road. It is noticed that the cult is comparatively more widespread in the northern areas of the district bordering Hooghly.

Vaishnavism and Vishnu worship

"In India Vishnu has been worshipped for a long time but he is of later origin than Siva This godhead is not the Vedic 'Aditya Vishnu'. Puranic Vishnu is the synthesis of Vasudeva-Narayana and Vedic Vishnu. In his worship Balaram, the elder brother, Pradyumna, the son, and Aniruddha, the grandson, of Vasudeva Krishna used to be revered together with Vasudeva. This is called *byuha*, or the worship of four icons, according to Pāncharātra Vaishnavism. This form of worship spread from the first or second century B.C. and flourished during the Gupta period and thereafter. Numerous Vishnu images of the Pala period have been discovered in Bengal to show that worship

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[1] Benoy Ghosh—op. cit. p. 594.
[2] Tarapada Santra—op. cit. p. 53.
[3] Panchanan Mandal—*Punthi Parichay*, Vol. 2. Santiniketan, 1958. p. 340.
[4] Asutosh Bhattacharya—op. cit. p. 504.

of this deity was widely prevalent in this part of the country. ... Gauḍiya Vaishnavism introduced in Bengal by Shri Chaitanya was the worship of Krishna in his playful aspect (*Lila Murti*). In many Vishnu temples Krishna images of various types are to be seen, namely, Balagopala (Narugopala), Venugopala, Madanmohan, etc. Shri Chaitanya himself was regarded as an *avatar* of Vishnu and was worshipped by his devotees as such. In many Vishnu temples of Rāḍha dual images of Shri Chaitanya and his compeer Nityananda in the act of singing devotional songs with raised arms are installed and worshipped."[1]

Krishnadas Kaviraj mentions in his *Chaitanya Charitāmrita* that Shri Chaitanya passed through Pichhaldaha (in Syampur P.S.) on his way to Panihati in the 24-Parganas district. An old image of Shri Chaitanya (Gour) is still worshipped at the neighbouring village of Kasimpur.[2] That Pichhaldaha was once a famous village sanctified by the visit of Shri Chaitanya and an important transhipment point across the Rupnarayan is evident from its mention in the maps of Gastaldi (1561), De Barros (1623) and Blaev (1650).

Rathajatra, Rasjatra and Doljatra, the three principal Vaishnava festivals are celebrated in the district at many places mentioned in the list of fairs and festivals included in an Appendix to Chapter VI.

The Dasanami Saiva sect

The Bhotbagan temple and monastery at Ghusuri (within Howrah city) is the seat of the Dasanami sect in the district. The Dasanami sannyasis originally came from north-west India and were Brahmins. In West Bengal their principal stronghold is at Tarakeswar which possibly had some connexion with the establishment of the Saiva monastery at Gaḍ Bhabanipur in Uday Narayanpur P.S. During the unsettled times attending the transfer of power to the British, these wandering bands of armed sannyasis established their monasteries at different places. That they were a secluded people practising esoteric rites is amply proved from the reasons for which the Bhotbagan temple and monastery were established. The name Bhotbagan means Tibetan garden. When a fight took place between the Bhutan and Cooch Behar royal families, Hastings sent troops which defeated the Bhutanese. The Bhutanese king prayed for mercy in 1772-73 through Tashi Lama of Tibet who sent representatives to Hastings, one of whom was Puran Giri, a Dasanami sannyasi. Later on, Puran Giri was sent to Tibet as a representative of the British Government whereupon Tashi Lama asked for permission to found a monastery by the Bhagirathi which was to serve as a resting centre for Tibetans visiting places of Buddhist pilgrimage in India. This prayer was granted and Puran Giri became the head priest of the temple and monastery in

[1] Translated from J. N. Banerji's article in Benoy Ghosh's *Paschim Banger Samskriti* (in Bengali). Calcutta, 1957. pp. 730-31.

[2] Haridas Das—*Madhyajugiya Gauḍiya Sāhityer Bhaugôlik-Ô-Aitihāsik Abhidhān*. Nabadwip, 1951. p. 63.

accordance with the wishes of the British Government and Tashi Lama and brought images of Buddhist gods and goddesses, namely Arya Tara, Mahakal-bhairav, Vajrabhrukuti and Padmapani from Tibet and China and installed them here. There are many graves in the temple grounds of dead *mohants* (chief priests) in the shape of miniature temples with phallic symbols of Siva—a Dasanami practice. The temple points to an integration between Tibetan Lamaism and native Dasanami Saivism.[1]

The Naths

"The Nāth cult", according to Sashibhusan Dasgupta, "is essentially a yogic cult; but among the innumerable yogic sects of India the cult is characterized as the Nāth cult due mainly to the fact that its stalwarts generally bear the title of 'Nāth', and the word Nāth has been dealt with in some of the standard Sanskrit texts as a philosophic concept for a state of supreme existence. . . . Some take it to be essentially a crypto-Buddhist or an esoteric Buddhist cult, which later seceded from the Buddhist fold and transformed itself into a Saivite cult. Others, on the other hand, are of opinion that the Nāth cult is essentially a Saivite cult, which, in course of its evolution, was assimilated within esoteric Buddhism and it is for this reason, that we find in it a hotchpotch of esoteric Buddhism and yogic Saivism. ... The Nāth cult seems to represent a particular phase of the Siddha cult of India. This Siddha cult is a very old religious cult with its main emphasis on a psycho-chemical process of yoga, known as the kāyāsādhanā or the culture of the body with a view to making it perfect and immutable and thereby attaining an immortal spiritual life. ...

"The deity of the cult, where traditional or iconographic record of the deity is available, is found to be Siva; the places of pilgrimage of the yogins of this order are generally of Saivite importance and the temples there often contain an image of Siva or the phallic symbol of the lord. Again in dress and other accessories the Nāth yogins are depicted just like images of Siva, who himself is the greatest of yogins. . . . the yogis of Bengal even to this day speak of themselves as belonging to the Siva-gotra (i.e , the Siva-lineage)."[2]

Under the main Nath seat at Mahanad in Hooghly district many other subsidiary centres had sprung up at various places of Howrah, Hooghly, 24-Parganas and Midnapore districts. In the district of Howrah there is a pocket of a few Nath devotees at Khurut in Howrah city. There is also a shrine of the same sect at Bauria.

Islam

Islamic influence on the social plane began to be felt in the area now comprising the Howrah district after A.D. 1568 when the Bengal Sultan, Sulaiman Karrani, overthrew the Oriya Kings and acquired control of this region. Thereafter, Muslims have gradually consolidated themselves here and in 1901 there were as many as 1,75,123

[1] Benoy Ghosh—op. cit. pp. 590-91.
[2] Sashibhusan Dasgupta—Obscure Religious Cults, 2nd Edn. Calcutta, 1962. p. 192-8.

(88,499 males and 86,624 females) of them in Howrah district, constituting 20.5% of the then district population. In 1951 Muslims numbered 2,61,414 (1,43,136 males and 1,18,278 females) accounting for 16.2% of the district population. Thus, between 1901 and 1951, although there was a fall in their proportion to the total population of the district, they actually increased in actual numbers by 49.2%. There was a further increase (in absolute numbers) of 27.5% by 1961 when Muslims in the district numbered 3,33,481 (1,80,435 males and 1,53,046 females) constituting 16.3% of the district population.

According to the 1961 Census, the largest number of Muslims live in Uluberia P.S. where there are 57,682 of them forming 28.47% of the thana population. Their concentration is, however, the highest in Panchla P.S. where they constitute 33.0% of the population of the police station. The lowest concentration occurs in Uday Narayanpur P.S. where they account for only 7.4% of the thana population. At Tikkiapara within the city of Howrah a large number of Muslims have been living for long unaffected by the partition of the country

"In this district", wrote O'Malley and Chakravarti, "the Muhammadans are almost exclusively Sunnis, neither the Wahabi nor the Farazi doctrines having spread among them. Malliks, Pathans or Saiyads are few in number and are found chiefly among the immigrants. It is curious, therefore, to find that in the Census of 1901 the largest number of Pathans were reported from such an out-of-the-way thana as Syampur. Jolahas, the weaving class, are found chiefly in Howrah city, where they are probably immigrants, but older colonies are found in thana Amta and at Panchla in thana Jagatballabhpur. The great majority in 1901 returned themselves as Sheikhs, a generic name which in this district includes all that do not claim to be Saiyads, Pathans, Mughals or to belong to some special caste, such as Jolahas. Most of the Sheikhs in rural tracts appear to be descendants of low class Hindu converts, who are too poor to be admitted among the Ashraf or respectable classes, and whose origin is indicated by their features and by their acceptance of Hindu superstitions. Many of them, however, are improving their position by means of shop-keeping and their skill as artisans; and a considerable percentage of the Muhammadan shopkeepers in Chandni and in the municipal market of Calcutta hail from thanas Jagatballabhpur, Dumjor and Uluberia."[1]

Sufism and Pirism

The Sufis and Pirs played an important role in consolidating Muslim power and infusing Muslim culture among the masses. "The biographical sketch of the Sufis reveal that their activities were not confined only within the four walls of their *Khānqahs*, rather they exerted a great influence in the people's minds and in the society. . . . They came, established *Khānqahs*, gathered disciples around

[1] O'Malley & Chakravarti—op. cit. p. 38.

them, imparted instructions, while some of them settled and died in this country. . . . Their *dargahs* and tombs are visited and venerated by hundreds of people even to-day. They influenced deeply the minds of the people in their lifetime. Sufism, thus became a powerful factor in the then society.[1]

"An important factor in Bengal's history is the preponderance of Muslim population. Whereas in Northern India, the place under the Imperial domination for centuries, Islam was confined into urban centres, in the deltaic Bengal, it captured the rural society. One reason for this position may be found in the missionary activities of the saints and the numerous *dargahs* scattered all over the country."[2]

Sufism is closely allied with Pirism. "The Sufis came to be known as Pirs in popular phraseology. . . . Superhuman powers were ascribed to them such as giving relief to the poor, destitutes and the patients, being present at several places at a time, giving life to the dead, killing anybody at their wish and telling the future. Naturally, the *Khānqahs, Chillakhanahs* or tombs of the Pirs became places of pilgrimage. . ."[3] The people "made offerings to the Pirs or their departed soul, built tombs and illuminated them. The rulers made endowments of land for the maintenance of their shrines and other establishments attached to them. They also introduced the stone-representation of the foot-print of the Prophet (Qadam Rasul). *Pirism* did not originate in Bengal, but the long settlement of the Muslims in this land side by side with the local people, many of whom were converted and taken to the fold of Islam, made the conception deeply rooted in the society. The converts found in the Pirs a resemblance of the *Tantric gurus* and in the tombs and *dargahs* that of *chaitya* or *stupa*. Moreover, the converts could not readily learn the religious principles, as the religious books were then available in languages foreign to them. . . . This is why, Sayyid Sultan, a mid-16th century Bengali poet, regretfully writes that the Bengali Muslims engaged themselves in reading Hindu mythological tales due to their ignorance of Arabic language.

"*Pirism* gave way to the further growth of concepts like those of *Satya-Pir, Panch-Pir, Manik-Pir, Ghora-Pir* and *Madari-Pir*. . . . It may be said with certainty that *Pirism* formed the basis of their growth. The Hindu society of the day worshipped deities like Manasa and Chandi for relief from all sorts of dangers. The *Satya-Pir* etc. probably occupied the same place among the Muslims as these deities did in the Hindu society."[4]

Local fairs and festivals in honour of Pirs

Many fairs and festivals are held at different places of the district in honour of the departed Pirs. There is an *āstānā* of Pir Gayesuddin

[1] Abdul Karim—Social History of the Muslims in Bengal (Down to A.D. 1538). Dacca, 1959. p. 124.
[2] ibid. pp. 138-9.
[3] ibid. p. 162.
[4] ibid. pp. 209-10.

in Gayespur village in Domjur P.S. The fair of Pir Sahib takes place for a day in January at Amta Bandar in Amta P.S. In Jagatballavpur, Manik Pir *melā* takes place in January at Manikpur and Brahminpara. At Sudanandabati in Panchla P.S. a fair called Sufridsahi *melā* is held in January and February. At Jangalbilas in Uluberia P.S. the Pir *melā* comes off in January. The Pir Sahib's *āstānā* at Kalyanpur in Amta P.S. is well-known in the neighbourhood. The *āstānā* of another Pir lying by the main road near Amragori in Amta P.S. was renovated, according to a marble plaque on it, by a Hindu. Indeed, the influence of Pirs appears to have been fairly widespread in the district in the past.

Christians

In 1901 there were 2,588 Christians in the district forming 0.30% of its population. The corresponding figures for 1951 were 3,268 and 0.20%. Thus, between 1901 and 1951 the Christian population in the district increased by 26.27%. In 1961 the Christians numbered 3,170 forming 0.15% of the district population. The slight fall in their numbers during the 1951-61 decade may be due to emigration, after Independence, of foreign and Anglo-Indian Christians abroad. The largest concentration of this community (1,637) is to be found in Howrah city and the smallest (2) in the Bagnan police station area That the Christians of the district are mostly resident in urban areas is proved from the fact that the 1961 Census enumerated 2,949 of them in the Sadar subdivision as against only 221 in Uluberia.

"The earliest missionary work", wrote O'Malley and Chakravarti, "was begun by the Baptist Missionary Society in 1793 under the Serampore missionaries ... The Society for the Promotion of Christian Knowledge had schools at Howrah in 1824 ... and also in the neighbourhood of Howrah at Sibpur, Salkhia, Ghusuri and Bally. In ... 1827 another school, having an attendance of 120 boys, was opened at Bator. In the same year we find that the Professors of Bishop's College (opened in 1824) undertook services in the Howrah church, which owed its erection chiefly to the exertions of Professor Holmes of that college. A Sunday-school was also opened by Mr. De Mello at the college, and one of those who attended it was baptized in 1830. Another school was opened by Mr. Bowyer in 1837 at Baiskati, 12 miles north-west of Howrah, a building being erected to serve both as a school and chapel. The same missionary had established an English school in 1830, at the suggestion of Bishop Turner, which was 'intended to serve as an ultimatum to all the diocesan schools in this district: it is proposed to select from each those scholars who are the most thoroughly instructed in Bengali, and at the same time farthest advanced in English, and remove them to this institution, where the teaching will be wholly confined to the latter language.' A Christian boarding school was also started about 1837. The Roman Catholic church at Cullen Place was built in 1832, and a school for Christian girls was opened in 1857 under the supervision of the nuns of the

Loreto House. The Loreto nuns were replaced in 1880 by the Daughters of the Cross, who have since then carried on their work among the native Christians of Howrah. . . .

"The Baptist Mission also works in Howrah, and the Baptist Zanana Mission has 4 girls' schools there. A small American Mission calling itself 'The Church of God' has lately been established in Uluberia. The Presbyterian Church also works in Howrah among Europeans, but it does not maintain schools or missions. The Presbyterians first began to work in Howrah in 1897, but the work simply meant a service in the Town Hall on Sunday evenings. In 1901 the present church was built, and in 1904 the hall adjoining the church was erected."[1]

Hindu Castes

In West Bengal Hindu Castes are usually divided into three broad classes: the *Varna* Hindu, the *Nabasākh* and the *Jal-achal* (untouchable) castes. The Brahmins, the Kayasthas and the Vaidyas are placed in the first category. Traditional trading castes like the Gandhabaniks and Tambulibaniks belong to the *Nabasākh* group but not the *Subarnabaniks*. The claim of the *Māhisyas* to *Nabasākh* status is disapproved by many. Artisan castes and a host of other castes traditionally given to highly specialized menial occupations are usually regarded as untouchables. But Tantubayas, Kumbhakars and Karmakars are in the *Nabasākh sreṇi*. These classifications do not hold good so firmly today as they did in the past because social power and prestige of a caste now varies from region to region depending on its size, cohesion and command over wealth. Customs apart, Hindus are broadly divided into two categories, namely those castes which figure in the President of India's Schedule of Backward Castes and those which do not. The Schedule, however, is not exhaustive, though it includes the names of quite a number of untouchable castes.

Brahmins

Brahmins are numerous among the *Varṇa* Hindus of the district. Apart from the fact that residence on the west bank of the Ganges (Bhagirathi) has always been considered to be of special religious merit, it may be noted that Baly has long been the seat of Rarhi Brahmins. To quote O'Malley and Chakravarti, "It (Baly) was a stronghold of Brahmanism, having several *tols* and being inhabited by many Rarhi Brahmans. The almanacs issued by its Acharyas or astrologers were much in vogue before the days of printing."[2] Rarhiya or Rarhi is the nomenclature derived from the old cultural-geographical zone called Rāḍha. Dihi Bhursut in Uday Narayanpur P.S., the seat of the old Bhursut principality, has been the home of Rarhi Brahmins, and a place of learning.

Barendra Brahmins, a nomenclature derived from the old cultural-geographical zone called Barendra (broadly North Bengal), are to be found in Santragachhi adjoining Howrah city, about which O'Malley

[1] O'Malley and Chakravarti—op. cit. pp. 36-7.
[2] ibid. pp. 150-51.

and Chakravarti wrote: "According to tradition, the principal family of the village, the Chaudhris, settled there 200 years ago in the time of Muhammadan rule, and being Barendra Brahmans, induced several other Barendra families to take up their residence in the village."[1]

Kayastha

In *Brihaddharma Purāṇa* and in *Brahmavaivarta Purāṇa* the Kayasthas have been described as *Karanas* or persons of clerical pursuits. By the end of the Sena period in Bengal, the Kayasthas had attained the status of *sat-sudras* of the highest order being engaged in administrative and clerical pursuits under the ruling power. They are now part and parcel of the *Varna* Hindu society and differ very little from the Brahmins in their economic moorings and occupational aptitudes. In fact, excepting the caste exclusiveness due to the observance of endogamy, casteism is not rampant in the inter-personal and inter-group behaviour between Brahmins, Kayasthas and Vaidyas.

Although O'Malley and Chakravarti[2] found the Kayasthas chiefly in Sibpur, they are spread over throughout the district. 'Raypara', a locality of the village named Raspur in Amta P.S., is inhabited by Kayasthas who are living there for at least 300 years. Ramkrishna Ray, who preceded the poet Rameswar and wrote an older version of the Bengali text 'Sivayan', was born in the family of the Rays of Raspur.

Mahisya

Mahisyas are numerically strong in deltaic West Bengal, including Howrah. Mainly farmers, many of them are agricultural labourers and share-croppers as also big land-owners. Educated members of these families are now in white collar jobs. Mahisyas claim the status of a *Nabasākh* caste but upper-caste Hindus do not take water from them, nor do Brahmin priests officiate in their religious ceremonies. They have their own class of *Vyāsokta* Brahmins who are not matrimonially related to other Brahmins.

While Mahisyas deny all connexions with Kaibarttas, whom they regard as *asat-sudras*, many scholars ascribe to the occupational specialization of a section of the latter and their consequent affluence the reason for the growth of the Mahisya caste. Of the three endogamous groups of Kaibarttas in Bengal, the Adi or Jalia Kaibarttas are supposed to be engaged in fishing; the Patni Kaibarttas, calling themselves *Lupta* Mahisyas, or extinct Mahisyas, are ranked by the former as below themselves in caste hierarchy while the *Hāliā* or *Chāsi* Kaibarttas, who are no longer to be found in Raḍha, claim the most superior status for themselves by dint of their occupation, namely agriculture in other parts of Bengal. Scholars suppose that the *Hāliā* Kaibarttas of Raḍha were once so numerous and economically and socially so powerful that they joined hands to raise their social status and changed their caste-nomenclature to that of Mahisya.

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[1] op. cit. p. 172.
[2] op. cit. p. 168.

This theory apart, the fact remains that a higher status is accorded to the Mahisyas than the Kaibarttas by all upper-caste Hindus.

A quaint practice of the Mahisyas of the district is to cremate their dead on homestead land or in fields close to the villages and erect small memorial pillars or temples on the spot with the names and dates of birth and demise of the deceased inscribed on them. Some other castes have also taken to this practice now.

Scheduled Castes

2,99,791 persons (of whom 16.22% are literate) belong to the Scheduled Castes of the district forming 14.71% of its population. Their rural-urban ratio is 78.55 to 21.45 per hundred. For every 10,000 persons of the following Scheduled Castes in West Bengal, 1,608 Kaoras, 1,088 Jalia-Kaibarttas, 847 Bagdis or Duleys, 746 Dhobis, 437 Poundras and 337 Namasudras belong to Howrah district

The following table indicates the number of different Scheduled castes people as found in the district in the Census count of 1961.

NO. OF SCHEDULED CASTES PEOPLE IN HOWRAH DISTRICT: 1961

Name	No. of Persons	Name	No. of Persons
Bagdi	10,348	Konai	38
Baiti	129	Konwar	21
Bauri	571	Kotal	72
Bediya	13	Lalbegi	132
Bhuimali	7	Lohar	365
Bhuiya	262	Mahar	101
Dhamar	8,836	Mal	892
Dhoba	3,820	Mallah	565
Doai	4	Mehter	3,744
Dom	1,332	Musahar	21
Dosadh	602	Namasudra	24,530
Ghasi	72	Nuniya	701
Hari	813	Paliya	6
Jalia-Kaibartta	12,773	Pasi	1,197
Jhalo Malo	82	Patni	33
Kadar	140	Poundra	38,289
Kandra	5	Rajbansi	36,246
Kaora	18,963	Rajwar	1,114
Karenga	4,120	Sarki (Nepali)	26
Kaur	93	Sunri (excluding Saha)	4,387
Koot	718	Tiyar	4,819
Khaira	52	Turi	324
Khatik	129		

Byagra Kshatriyas (Bagdis)

Numerically, the Byagra Kshatriyas (Bagdis) form the largest caste group in the district numbering 92,949 persons (or 4.5% of the district population according to the Census of 1961). Of their working population, about 8% are cultivators and 7% agricultural labourers, the majority being share-croppers. They are also engaged in transport services and in manufacturing industries and construction work in smaller numbers. According to the *Brahmavaivarta Purāṇa*, they are descended from a Kshatriya father and a Vaishya mother. Risley described the Bagdis as a cultivating, fishing and menial caste of central and western Bengal. Dalton opined that they were the remnants of an aboriginal race who by marriage with low-caste Hindus became fishermen and palanquin-bearers, forsaking all primitive ties. They are divided into several sub-castes such as Tentulia, Dulia, Matia etc. which are again sub-divided into other totemistic clans. They take part in Hindu festivals like *Gājan* or in the worship of folk gods and goddesses like Sitala, Manasa etc.

Poundras

Pods or Poundras are the second largest caste group in the district numbering 38,289 or 1.8% of the district population according to the Census of 1961. Of their working population, about 6% are cultivators, 14% agricultural labourers and 8% are engaged in manufacturing industries other than household industry. According to Risley, Pod, Padmaraj or Chasi is a fishing, cultivating, land-holding and trading caste of lower Bengal. They are said to be descended from a Kshatriya father and a Napit mother but they claim themselves to be Kshatriyas and hence call themselves Poundra Kshatriyas Of late, their social status has improved considerably. "As regards education, Pods have almost come to the level of other advanced communities."[1] They are orthodox Hindus following the Saiva, Sakta or Vaisnava creeds.

Rajbansis

Rajbansis, numbering 36,246, constitute 1.7% of the district population. Of their working population, about 16% are cultivators, 4% agricultural labourers and 3% are engaged in fishing and allied work. According to Dalton, Risley, Gait and Hamilton, Rajbansis did not like to affiliate themselves with tribal people. There were, however, reasons to believe that they were converted into Koches. Risley thought that Rajbansis, Koches and Paliyas were of Dravidian stock with possible admixture of Mongolian blood. But the Rajbansis of southern Bengal including those of Howrah district may not belong to the same group as the Rajbansis of north Bengal. The Rajbansis of the Howrah district are known as Tiyars or Keots while those of north Bengal are called Koches. They practise Hindu rites and customs and worship Hindu gods and goddesses.

Namasudras

Namasudras numbering 24,530 constitute 1.2% of the district population. Of their working population, about 7% are cultivators.

[1] Das, Roy Chowdhury and Raha—Handbook on Scheduled Castes and Scheduled Tribes of West Bengal. Calcutta, 1966. p. 95.

2% agricultural labourers and 5% are engaged in manufacturing industries other than household industry. Some of them are also engaged in trade and commerce, in transport services and in construction work. According to Risley, they are a non-Aryan caste of Bengal akin to Chandals who were treated as outcastes in Hindu society. But the latter conclusion does not seem to be correct. Many Namasudra families have migrated to the district after the partition of India. They are good cultivators, carpenters and makers of musical instruments and are traditionally a people possessing martial qualities. They are also educationally advanced and follow all Hindu rites and customs.

Kaoras

Kaoras numbering 18,968 constitute 0.9% of the district population. Of their working population, about 2% are cultivators, 8% agricultural labourers and 3% engaged in manufacturing industries other than household industry. In Bengal they are considered to be a sub-caste of Haris or of Doms They profess Hinduism.

Chamars and Muchis

Muchis numbering 13,197 constitute 0.6% of the district population. They are mostly engaged (10.5%) in manufacturing industries other than household industry and about 3% are engaged in household industries of their own. Very few among them work as agricultural labour. Risley presumed that a caste like the Muchis, engaged in a filthy and menial occupation, must have been of non-Aryan stock. Chamars, a caste occupationally not dissimilar to the Muchis, trace their descent from Ruidas, the famous disciple of Ramananda. Hence they call themselves Ruidas or Rabidas. The Chamars are divided into a number of endogamous groups They engage themselves in tanning work, while the Muchis do leather-dressing. The latter have also several subdivisions, namely Barabhagiya, Chasa Kinur, Betna etc. Chamar women also work as midwives. Chamars are mostly Sree Narayanis by creed while some belong to the reformed Satnami sect. On the other hand, majority of the Muchis are of Saiva sect but a large number of the Betnas are Vaishnavas. Their principal festivals are Sree Panchami held in the Bengali month of *Māgh* and Devi Puja held in *Āswin*. They also worship Viswakarma, Sitala, Jalka Devi and other minor deities. Muchis consider themselves superior to the Chamars inasmuch as the latter work with raw hides. But to the *Varna* Hindus both are equally lowly.

Jalia-Kaibarttas

Jalia-Kaibarttas, numbering 12,773, constitute 0.6% of the district population. Of their working population about 12% are engaged in fishing and allied occupations and 3% in small trade and commerce. They are mainly a fishing caste, being a section of the Kaibarttas. According to Risley, they are possibly of Dravidian origin with a slight infusion of Aryan blood and are among the earliest inhabitants of deltaic Bengal. They are mainly Vaishnavas and follow Hindu rites and customs. Their characteristic festival is the *Jālpui* or laying by of the net, which begins on the first day of the Bengali month of

Māgh. They also worship Sitala and Chandi and other folk deities of the Hindus.

Dhobas

Dhobas numbering 11,539 constitute about 0.5% of the district population. Of their working population some 4% are cultivators, 3% agricultural labourers and 2% are engaged in manufacturing industries other than household industry. They are traditional washermen and many of them are still engaged in this hereditary profession. According to Risley, they are descended from the Doms and have a number of sub-castes, the members of which eat and drink together but never inter-marry. Most of them belong to the Vaishnava sect while a few are Saktas. They worship Viswakarma and other gods and goddesses of the Hindus.

There are also the Tiyars (4,819), Sunris, excluding Sahas, (4,387), Karengas (4,120), Haris (3,808), Mehtors (3,744), Doms (2,788) and several other minor castes belonging to the President's Schedule resident in the district.

It is interesting to note that there are several villages in the district where the entire population belongs to the Scheduled Castes. Instances are Bhagabatipur in Sankrail P.S. where the major castes are Pods, Bagdis and Rajbansis; Syam Chak in Panchla P.S. where the principal castes are Bagdis, Kaoras, Rajbansis and Pods; Kumarpur in Jagatballavpur P.S. where the main castes are Bagdis, Rajbansis, Sunris (excluding Sahas) and Namasudras, Chak Hari and Chak Kadamtola in Domjur P.S. where the chief castes are Bagdis, Pods and Rajbansis; Madhubati, Rauta and Dadpur in Uluberia P.S. where the major castes are Bagdis, Namasudras, Pods and Rajbansis; Madaribar in Syampur P.S. where the principal castes are Pods, Bagdis, Karengas, Namasudras, Rajbansis and Jalia-Kaibarttas; Iswaripur in Bagnan P.S. where the main castes are Namasudras, Bagdis, Kaoras and Rajbansis; Chak Kundalia, Kalasdihi, Fatikberia, Sarpai, Chalunia and Mollar Chak in Amta P.S. where the chief castes are Bagdis, Rajbansis and Jalia-Kaibarttas.

Scheduled Tribes

Scheduled Tribes number 6,111 in the district forming 0.3% of its population. Of them 6.33% are literate. In 1951 they numbered 8,093 which means that over the decade 1951-61 their population strength decreased by 24.49%. According to the Census of 1961, 3,909 of them belonged to the rural areas and 2,202 to the urban areas of the district. There are 780, 574, 238 and 222 Oraons in Domjur, Sankrail, Jagachha and Baly police stations respectively. Mundas number 217 and 211 in Jagatballavpur and Jagachha thanas. The number of Santals in Sankrail, Jagatballavpur, Baly, Bauria and Uluberia police stations are 557, 458, 358, 231 and 215 respectively.

The following table indicates the number of different scheduled tribes people as found in the district in the Census count of 1961.

NUMBER OF SCHEDULED TRIBES PEOPLE IN HOWRAH DISTRICT : 1961

Name of tribe	No. of persons	Name of tribe	No. of persons
Bhumij	29	Mahali	36
Garo	8	Mal Pahariya	20
Hajang	4	Mech	4
Ho	161	Munda	1,003
Kora	100	Nagesia	4
Lodha, Kharia or Kheria	80	Oraon	1,894
Magh	140	Santal	2,312

Oraons

According to S. C. Roy, the traditions of the Oraons point to the Deccan as their native place. Dalton, however, thinks that they originated in Gujarat or Konkan on the western coast of India. Gait believes that they came from the Carnatic region up the Narmada river. Oraons of Chotanagpur call themselves *Kurukh* in their own language. Roy traced the origin of the word *Kurukh* to one of their mythological hero-kings called Karakh and connected him with Karusdesh, the ancient name of their previous homeland in Sahabad. Hahn held that the name Oraon might have been coined by the Hindus from the word Orgora (meaning a hawk), a totemistic sept of the Oraons. According to Grierson, the word Oraon may have come from the Indo-Aryan word *Uran* (spendthrift) which bears an allusion to the alleged thriftless character of these people. Roy further thinks that the Oraons came to be called Raonaput or the sons of Ravana from which the term O-rawan or Oraon was derived.

The Oraons of Howrah district are mainly employed as farm hands or as brickfield labourers In religious beliefs and practices they follow a mixed form of Hinduism and animism. They consider Dharam or Bhagwan as their supreme deity and also worship Debimai, Gaondeoti, Kali, Manasa, Sitala and Hari.

Mundas

The Mundas of the district are mostly agriculturists and day-labourers. They follow a mixed form of Hinduism and animism in their religious beliefs and customs. Their supreme deity is Sing Bonga or the sun. They observe *Māghe Parab*, *Sarhul Parab*, *Fāguā*, and worship Kali, Sitala etc.

Santals

The Santals of the district may be grouped into three classes: (*i*) the educated amongst them hailing from different districts and residing in rented houses for facilities of employment in urban areas.[1] (*ii*) those who have long settled in the district, specially in the rural thanas, and (*iii*) those who came for seasonal agricultural work or for road making and allied activities. The Santals are considered to be a

[1] This group has been dealt with in Chapter XV.

primitive tribe and classed, on linguistic ground, as Kolarian. They are animists and follow their traditional rites and customs and speak in their own language. Their supreme deity is 'Thakur' who is benevolent but the godlings or the bongas are malevolent and require constant propitiation. Each family has also a special nook where oblation is offered to the souls of departed elders.

Folk festivals

The *Soylā* festival

The *Soylā* festival, peculiar to this district, is in vogue particularly in the Amta, Bagnan and Syampur thana areas. It consists of a ceremonial establishment of friendship between persons of the same sex irrespective of caste or creed. The seat of the local folk-deity, especially Manasa, is usually chosen as the venue for performance of the rites. The duration of the festival varies from two to three days in different areas. The most propitious time for its observance is the Bengali months of *Phālgun* and *Chaitra* (mid-February to mid-April) but it is also held in *Bhādra* when the annual worship of Manasa takes place. Songs from the *Maṅgal Kāvyas* called *jāgaran gān* are sung overnight and friendship rites are performed thereafter, specially at the end of the *bhāsān* (immersion) song of Manasa when with accompanying music the prospective friends exchange garlands and become friends for good.

Festival of Entel Thakur

Another folk festival observed in the district on all Sundays of the Bengali month of *Agrahāyan* relates to Entel Thakur whose soft clay image is improvised by men on a big earthen pot and by women on an earthen plate and two earthen pots decorated with floral designs. Some corns and vegetables are also put into the dish and the pots. The women-folk, who perform the rites separately, officiate as priests themselves. On the last day of the month the deity is immersed to the accompaniment of blowing conch-shells. The ritual may be compared with the festivals of Tusu or Itu at other places. It may be that the word *Entel* is derived from the word *Āditya*, meaning the sun. As the festival takes place only on Sundays (*Rabi-bār*), it may be a form of sun worship converted into a folk festival.

Festival of Ghentu Thakur

In the Bengali month of *Chaitra* young men move from village to village singing songs in praise of the folk-god Ghentu and carrying his image on their shoulders. As he is considered to be a variant form of Siva, a Siva image and a lighted lamp are also carried by the processionists. The image of the god is also formed in the following manner: the back of an old and used earthen pot is smeared with cow-dung on which two small cowries are set for his eyes and a vermilion mark put on the forehead. He is placed on a broken winnowing fan at the time of worship. The journey over (when the men in the procession collect rice and coins from each household), the image is taken to a road-crossing and after some chants have been uttered, the pot symbolizing Ghentu is broken to pieces. Ghentu is regarded as the god of skin diseases and appears to have a non-Aryan origin.

Dhelā Felā festival

What is known as *Arandhan* (cessation of cooking) elsewhere is *Dhelā Felā* festival in Howrah district. It is a form of worship of the serpent goddess Manasa in whose honour no cooking is done on the Dasahara day in the Bengali month *Jyaiṣṭha* (May-June) or on the last day of *Srāvana* (July-August) when due to heavy rains snakes are supposed to take shelter in the hearths of rural households. The next *Arandhan* festival is called *Chachchari* puja celebrated on a Tuesday or Saturday of the Bengali month of *Bhādra* (August-September) when all must place their offerings at the seat of Manasa. The last *Arandhan* festival of the year is called *Rānnā* puja or cooking festival, which is celebrated on the last day of *Bhādra*. Rice and vegetables are cooked on the previous day and offered to Manasa before they are distributed among invitees.[1]

Heleni festival

The cultivators of the district celebrate the *Heleni* festival at the end of *Bhādra* when young paddy plants are growing in the fields. Each farmer takes three sips of water and goes to the north-east corner of his plot and chants prayers wishing a bumper harvest.[2]

Gājan festival

Gājan is one of the most popular festivals of the district. The *Gājan* of Siva is held at the end of the Bengali month of *Chaitra* (March-April) while that of Dharma occurs in *Baisākh* (April-May). In Bagnan P.S. *Gājan* is also celebrated in honour of Chandi and Bishalakshi. The rites connected with the festivals of Siva and Dharma are similar and have been broadly described earlier. According to Sashibhusan Dasgupta: "In the well known religious ceremony of West Bengal known as the Gajana of Dharma, which is the most celebrated function of the Dharmaites current even to the present day, Dharma has been frankly made Siva and the Gajana of Siva really means the Gajana of Dharma."[3] In the *Gājan* of Dharma one may trace the influence of Buddhism on Hinduism. It may be that the primitive sun worship of Bengal may have left its impress on the popular Saiva cult in this manner.[4]

New religious leaders and movements

The Brahmo Samaj founded by Raja Rammohan Ray (1772-1833) "helped to emancipate India from mediaeval feudalism to national democracy, from blind faith and anti-social customs to knowledge and science, in a threefold emancipation: intellectual and religious, social and moral, and political."[5] It started with an anti-idolatrous approach on the religious plane and then developed into a pioneer movement for the resuscitation of the socio-cultural life of the country in the 19th century. "The Brahmo Samaj was the first endeavour from *within* the society to pull India out of the morass of

The Brahmo Order

[1] Tarapada Santra—op. cit. p. 88.
[2] Ibid. p. 96.
[3] Sashibhusan Dasgupta—Obscure Religious Cults, 2nd edition. Calcutta, 1962. p. 279.
[4] Asutosh Bhattacharya—op. cit. p. 565.
[5] Atulchandra Gupta (Ed.)—Studies in the Bengal Renaissance. Calcutta, 1958. p. 479.

mediaeval feudalism and help place her on her feet in line with modern thought currents, its immediate vehicle of expression being the new rising middle class of Bengal and then of India. That is why in its initial stage the Brahmo Samaj got such an enthusiastic response from the intelligentsia, the merchants and the new feudal-bourgeois zemindars of the British regime. ... The Brahmo Samaj, in waging war against idolatry, hit at the very root of this ages-old religious feudalism, emancipating the intellect of the people from the thraldom of the priestly classes. ... After ... 1878, philanthropic and educational activities were continued in the Brahmo Samaj of India, though on a smaller scale, but social reform activities almost stopped. Brahmananda Keshubchandra immersed himself in communion with God, in intimate spiritual endeavours—*Yoga* in *jnana*, *bhakti*, *seva* etc.—in his new retreat, Sadhan Kanan. He formed his missionaries into an 'Apostolic Durbar'. On 25 January 1880 . . . Keshub declared his Navavidhan or the New Dispensation in and through which he announced 'Harmony of Religions'. Two of the cardinal principles of Navavidhan were (1) that all religions are true and (2) pilgrimage to the prophets and saints (*Sadhusamagam*), by which a devotee can enter into the spirit of all the prophets and saints of the world. He introduced many new rituals into the New Dispensation. The most remarkable contribution of Keshub in this period was his appointing some of his disciples to the study of the different scriptures of the world, viz, of Christianity, Buddhism, Hinduism and Islam."[1]

In Howrah district, the pioneering work for the spread of this new gospel was done by Fakirdas Ray who was born in a rich family of Amragori in Amta P.S. and embraced Brahmoism during his college days in Calcutta after witnessing the saintly activities of Keshubchandra Sen of the Navavidhan Order. He established a society at his native place for religious and social reform and started a Middle English school in a village close by, where he and some of his friends and relations worked as teachers for years. Fakirdas along with his colleagues was admitted into the Navavidhan Order in 1880 and chose his own village as the proper field of his activities. This selfless band of reformers worked tirelessly for the promotion of education. betterment of village sanitation and elevation of the moral atmosphere of the whole neighbourhood. In 1890-92 Brahmoism also spread in and around Baniban in Uluberia P.S. at the initiative of some other persons.

It is curious that Brahmoism in the district thrived only in the rural areas. In 1901 there were 85 Brahmos in the district, of whom 45 were males and 40 females. According to the 1961 Census, there were 63 of them, of whom 14 were males and 49 females. Of these 63, again, 23 lived in urban areas and 40 in the countryside. As to the

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[1] ibid. pp. 482-507.

spread of Brahmoism in the urban areas of the district, C. N. Banerjei wrote:[1] "The Brahmos established a Samaj at Santragachi in 1858. It used to meet on Sunday evenings in the house of a gentleman of the village for purpose of worship but owing to want of support, not pecuniary support, it had to be closed in 1864. Whilst this institution was in full operation, another one was opened in 1861 in Ramkristopore. Its members used to assemble for worship up to 1868, every Tuesday evening, and on the mornings of the last Sunday of the month. Since 1868 their meetings have discontinued." It would thus appear that Brahmoism has not spread very much in the district and has heavily declined even at those centres where it had taken root during the last century.

The Ramakrishna Order

On the western bank of the Bhagirathi (in P.S. Baly), some four miles north of Calcutta, stands the Belur Math, the headquarters of the Ramakrishna Mission, which perhaps represents the most potent force in living memory for a religious and cultural regeneration of modern India. The consecration of the Math (monastery) was performed by Swami Vivekananda on December 9, 1898 and on January 1 of the following year it became the headquarters of the monks of the Ramakrishna Order. "It was my wish", Swami Vivekananda had once said, "to convert this Math into a chief centre of spiritual practices and the culture of knowledge. The power that will have its rise from here will flood the whole world and turn the course of men's lives into different channels; from this place will spring forth ideals which will be the harmony of knowledge, devotion, yoga and work."[2] Over the years this noble ideal has taken shape in this institution which now serves humanity in manifold ways in India and abroad. To quote Swami Tejasananda, "The enlightened vision of Swami Vivekananda embraced in its comprehensive sweep almost all the major problems of Indian life, viz., liquidation of illiteracy, rural reconstruction, work among the labouring and backward classes, economic and social uplift of the people removal of untouchability, female education, relief works in times of natural calamities, preservation of indigenous culture, dissemination of the accumulated spiritual wisdom of the race and the evolution of a cultural synthesis. . . . The Ramakrishna movement, embodying as it does the spiritual consciousness of a newly awakened race, seems to constitute one of the most significant and important historical events of the nineteenth century. . . . The movement inaugurated by Sri Ramakrishna, sustained by the Holy Mother, organized by the great Swami Vivekananda and expanded by his brother disciples, has crystallized today into a dynamic religious institution imperceptibly

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[1] C. N. Banerjei—An Account of Howrah, Past & Present. Calcutta, 1872. pp. 64-5.
[2] Swami Tejasananda—The Ramakrishna Movement: Its Ideal and Activities. 2nd Edn. Howrah, 1956. p. 22.

moulding the social and spiritual aspiration of the country. . . . In India, the Ramakrishna movement, though working without any of those natural advantages enjoyed by the Buddhist or the Christian monks, has stood for the emancipation of Indian life from its state of torpitude by means of a cultural awakening and the stimulation of the spiritual instincts of the race. Even the cloistered monasticism of old, which in India was concerned primarily with personal liberation, received a new orientation under the aegis of this movement. It was not allowed to remain an institution altogether cut off from the happiness and sorrows, the hopes and aspirations of the people at large, but was brought into the full blaze of the work-a-day world to function as an instrument of liberation, both individual and collective. Thus the Order represents a synthetic ideal of renunciation and service, which not only emphasizes a course of strict moral discipline, contemplation and study but also a life of self-dedication at the altar of humanity for the attainment of the highest goal of human existence. . . . As a great seer, the Swami visualised the dawn of a new civilization evolved through a happy synthesis of Vedanta and Science—the ideals of the East and West—a civilization in which the various types of culture will be harmoniously blended, but will still have adequate scope for full play and development, and the last civilization of the world, like her first, will be a civilization not of struggle and warfare, but of peace and sympathy, charity and harmonious co-operation to a great end. . . . The Swami carried this gospel of Vedanta to the farthest corners of the world, and inaugurated a new Vedantic movement to bring about a spiritual revival that will have no room for religious persecution or intolerance in its polity, which will recognize Divinity in every creature, high or low, and which will concentrate all its energy in aiding humanity to realize its true divine nature. Indeed, on the part of India nothing can be more glorifying and beneficial than this type of spiritual service that has been initiated by the great master-mind of the East to bring about a thorough change in the mental make-up of mankind."[1]

SOCIAL LIFE

Relation between social classes

Before the introduction of the West Bengal Estates Acquisition Act of 1953, agrarian classes in the district were arranged in tiers with the ryots at the bottom and the zemindars at the top, there being as many as three main layers of intermediaries in between in many areas. While the landed gentry today consists mainly of Mahisyas, Brahmins and Kayasthas, the actual tillers of the soil belong chiefly to the scheduled castes, namely the Rajbansis, Bagdis, Jalia-Kaibarttas etc.

Impact of recent land legislations on social relations

The West Bengal Estates Acquisition Act abolished zemindary and intermediary rights on land and the cultivators now pay rents direct to the State. The landed gentry of the past now get their lands culti-

[1] ibid. pp. 22-32.

vated by *bargādārs* (share-croppers) or hired labourers. They are also largely engaged in trade and commerce or in white-collar jobs. The report of a survey of small industries in the district reveals "the presence of a traditionally agricultural caste (namely, the Mahisyas—Ed.) in the small engineering industries of Howrah is a feature in line with the general loosening in recent times of the formerly rigid correlations between caste and occupation in India."[1] The same trend was noticeable in the village Mahisgot in Sankrail P.S. where an initial survey in 1957 and a re-survey in 1962 were undertaken by the Agro-Economic Research Unit of Santiniketan. With the extirpation of the intermediaries and the recognition of the ryotwari rights of the cultivators, changes in the latter's social and material outlook have become palpable. In Mahishgot "complete ownership of produce engage them to improve the level of enterprise. The size of average ownership holding for the village increased from 1.80 to 1.84 acres. . . . Implementation of land reform, one of the major forces of change acting on the village had distinct and considerable impact on the occupational structure of the village but the change remained confined within the limits of the small scale cultivation."[2]

Social aspects of small industries

There are numerous small engineering firms in the district working as turning shops and manufacturing units producing and processing a variety of engineering products. The social aspect of these ubiquitous industries was studied by the Unesco Research Centre on Social and Economic Development in Southern Asia in 1959-60 and its findings were that *Māhisyas* were predominant among the employers (26 out of 40) and the workers (about 70 per cent of the total number studied) in Howrah.

65 per cent of the employers studied, 26 out of 40, were *Māhisyas*; only three were *Brahmins*, an equal number *Kayasthas*, and the remainder belonged to various other castes such as *Subarnabanik* (goldsmith), *Lohār* (blacksmith) and *Jugi* (weaver). . . . A majority of the 182 workers interviewed, in fact more than 70 per cent, were *Mahisyas*. *Kayasthas* formed about seven per cent and *Brahmins* about five per cent of the total number studied; the remaining belonged to different castes such as *Namasudra*, *Karmakar*, *Telī*, *Beldār*, and *Kāhār*. Agriculture or agriculture combined with business or service was the caste or traditional occupation of about 83 per cent of the workers studied. The dissociation of occupation from caste was noticeable even in the generation of the grandfathers of the entrepreneurs interviewed.

The occupational pattern showed a remarkable change in the next generation in the case of employers, a majority of them having taken

[1] Unesco Research Centre on Social and Economic Development in Southern Asia—Social Aspects of Small Industries in India: Studies in Howrah and Bombay. Delhi, 1962. pp. 13-4.

[2] Dr. G. C. Mondal and N. Bandyopadhyay—Mahishgot Village Survey, Santiniketan, 1967.

to service or salaried employment, and there was relative unimportance of the link between the traditional and the present occupations in the case of employers as well as employees. The small engineering industry in Howrah thus did not represent the continuation of a traditional occupation using modern technology; it was based on work experience rather than hereditary skill.

The influence of work in small factories in itself was likely to have little bearing on their (entrepreneurs') social life. ... In the case of the workers as well, the impact of work in small factories as such was unlikely to have influence on changes in their social life. Nearly 90 per cent of them observed religious rites and caste regulations, though caste as a link with the traditions of the past was slowly losing ground. It might be due to the industrialization and consequent urbanization of the district, an amalgam of diverse castes and communities in recent years. The purity of original caste distinctions could not be maintained against all the external conditions and alien influences affecting social behaviour in Howrah. Occupational immobility based on the caste system had fostered economic stability in India in the past. But growth of population and the incapacity of village economy to provide livelihood to the blacksmiths made them mobile.

Blacksmiths: a kin-group work-organization

Howrah has attracted a large number of them to meet the requirements of various industries suited to their skill. Blacksmithy has thus become a traditional occupation in the industrial areas of the district. That the trade is not restricted to any caste has been shown in a report of the Unesco Research Centre on Social and Economic Development in Southern Asia which states: "For most blacksmiths in Howrah it was the continuation of a traditional occupation in a new industrial environment. About three-fourths of the sample claimed blacksmithy as family trade; others represented the *Mahisya* and the *Kayastha*, the *Brahmin* and the *Baisnab*, the fishermen and the barber classes with a title to the corresponding professions. For the latter, blacksmithy was not a way of life but a source of livelihood; they learnt the trade by training and experience, rather than as an inheritance from their forefathers."[1]

Marriage

Age at marriage

The following table, based on 1961 Census data, gives the percentages of persons having different marital status to the total population of the district according to each age-sex group:

MARITAL STATUS ACCORDING TO AGE-GROUPS: HOWRAH DISTRICT: 1961

Age-Group	Unmarried Percentage of		Married Percentage of		Widowed Percentage of	
	Males to total male population	Females to total female population	Males to total male population	Females to total female population	Males to total male population	Females to total female population
All ages	54.9	45.2	42.6	41.5	2.1	12.9
0-9	100	100	0	0	0	0

[1] op. cit. p. 90.

Contd.

MARITAL STATUS ACCORDING TO AGE-GROUPS: HOWRAH DISTRICT: 1961—*Contd.*

Age-Group	Unmarried Percentage of		Married Percentage of		Widowed Percentage of	
	Males to total male population	Females to total female population	Males to total male population	Females to total female population	Males to total male population	Females to total female population
10-14	99.4	91.7	0.4	7.9	0	0
15-19	92.0	33.1	7.6	65.7	0	0.5
20-39	30.2	3.6	68.3	88.7	0.9	7 0
40-50	2.7	0.3	91.0	56.3	5.6	42.8

It would be interesting to compare the above table with another below, prepared from Census data of 1901, for noting the changes that have taken place over this 60-year period.

MARITAL STATUS ACCORDING TO AGE-GROUPS: HOWRAH DISTRICT: 1901

Age-Group	Unmarried Percentage of		Married Percentage of		Widowed Percentage of	
	Males to total male population	Females to total female population	Males to total male population	Females to total female population	Males to total male population	Females to total female population
All ages	47.4	26.9	49.0	46.3	3.6	26.2
0-10	99.7	92.2	0.3	7.3	0	0.4
10-15	94.4	14.7	5.4	80.1	0.2	5.1
15-20	68.3	0.7	31.1	87.8	0.6	11.4
20-40	13.6	0.2	83.7	71.5	2.7	28.3
40-60	2.8	0 1	87.1	28.8	10.1	71.1

It is evident that between 1901 and 1961, there has been a significant upward movement of age at marriage for both males and females. In 1901, 5.4% of males used to get married between 10 and 15 years; the corresponding figure in 1961 for the age-group 10-14 was only 0.4%. 31.1% of males were married between 15 and 20 years in 1901 while only 7.6% of them were found married in 1961. Similarly, in 1901, 7.3% of girls in the 0-10 years age-group used to be given in marriage, whereas the corresponding figure for 1961 was nil. In 1901, 80.1% of females used to be married off when they were between 10 and 15 years of age, but in 1961 the corresponding figure for the same age-group came down to as low as 7.9%. Analogous figures for the 15-20 years age-group were 87.8% in 1901, and 65.7% in 1961.

Though the Hindu social codes divided marriageable women into five age-groups, namely *Nagnikā* (infant-girl), *Gouri* (girl aged 8),

Rôhiṇi (girl aged 9), *Kanyā* (girl aged 10) and *Rajaswalā* (girl above 10) and though Manu prescribed that the best age to give a girl in marriage was when she was a *Gouri*, the practice of early marriage has been disfavoured in the recent past not only on moral grounds but also for economic reasons. Early marriage has, however, been prevalent among the low castes. Though the Sharda Act of 1929 set down the minimum marriageable age for males and females at 18 and 15 respectively, it did not influence the time-old practices to any appreciable extent as a marriage contrary to the provisions of the Sharda Act did not, *ipso facto*, lead to its annulment but only to a light punishment of the negotiators.

The Special Marriage Act of 1954 fixed the minimum marriageable age for males and females at 21 and 18. The average age of boys and girls of the district marrying under this Act between 1956 and 1966 was 26-28 and 20-22 years respectively. During 1956, 1961 and 1966 the number of marriages registered in the district under the same Act was 17, 41 and 46 respectively. In 1966 only 2 marriages took place under the Hindu Marriage Act of 1955; the corresponding figures for 1956 and 1961 being nil. Though inter-caste and inter-religious marriages are now permissible under Act XXI of 1949 and the Hindu Marriage Act of 1955, such marriages, according to the following table, do not appear to be popular in the district:

Kind of Marriage	Year 1956	1961	1966
Inter-caste	10	18	15
Inter-religious	4	4	4

Widow re-marriage

Widow re-marriage, prohibited under the Hindu marital code, was legalized in 1856 through the untiring efforts of Pandit Iswar Chandra Vidyasagar. But Hindu widows were generally found averse to re-marrying mainly because of their attachment to tradition. The Hindu Succession Act of 1956 guaranteed a widow's share in her husband's property. Yet in 1956, 1961 and 1966 only 1, 3 and 2 upper-caste Hindu widows were re-married in the district. Among the lower castes, however, marrying of widows by junior levirates is not against social custom. But the practice is fast dwindling owing to the influence of the higher castes.

Divorce

Divorce was unknown to Hindu law previously. It has been allowed since the enactment of the Special Marriage Act of 1954 and the Hindu Marriage Act of 1955. The following table will show that suits for divorce, annulment of marriage and judicial separation are steadily increasing. Yet they are mostly confined to the urban educated classes and do not affect in the least the rest of the multitudes inhabiting the district.

MATRIMONIAL SUITS IN HOWRAH DISTRICT: 1955-66

Year	Total No. of Suits Filed	No. of Divorce Suits		No. of Other Matri-monial Suits*	
		Filed	Allowed	Filed	Allowed
1955-56	6	2	nil	4	1
1960-61	123	41	24	82	36
1965-66	185	66	34	119	42

Polygyny

Kulinism, of which polygyny was a direct concomitant, was widely prevalent in Bengal since it was initiated by Vallālasena of the Sena dynasty. It was Raghunandan Bhattacharya, a Sanskrit scholar of *Smriti,* who made it strongly rooted to the social structure of the Bengalis. Among the Brahmins, if all the daughters were married to *kulin* Brahmins, then and then only the Kulinism of the father remained intact. But the case was different with the *Kāyasthas.* If only the eldest son of a *Kāyastha* married a *kulin* girl, then the Kulinism of the father was considered unbroken. Among the Brahmins, the custom led to a great dearth of eligible bride-grooms and according to O'Malley and Chakravarti, "a Kulin Brahman who died at Bally in 1839 is said to have had 100 wives."[1] They said that polygamy used to be common among *Rāḍhi Kulin* Brahmins, but had already disappeared by 1909 (when they wrote the last Howrah District Gazetteer), partly for economic reasons but chiefly for pressure of adverse public opinion. They remarked, "One effect of this change has been to increase the demands of the bridegroom's guardians, as a large number of husbands are now required, where previously one would have sufficed."[2] The Hindu Marriage Act of 1955 has made polygyny illegal. The Muslims can, however, marry up to 4 wives at a time.

Property inheritance and family structure

The Dayabhaga system of Hindu law governs inheritance among the Hindus in West Bengal. The Hindu Succession Act of 1956, applicable equally to the sections following the Mitakshara and Dayabhaga systems, has conferred equal rights on daughters to share paternal properties with their brothers in case the parents die intestate. The joint family with its commonness in estate, food and worship is conventional in the district, especially among the land-owning and business-owning families. The more common type is the one in which the source of income, viz. land or business interest remains under joint ownership but there are separate hearths for each of the component units. With the fixation of land ceilings under the West

* Other matrimonial suits relate to judicial separation, restitution of conjugal rights, annulment of marriage etc.

[1] O'Malley & Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 35.

[2] loc. cit.

Bengal Estates Acquisition Act, an important change has taken place in the structure of big land-owning families. To evade the ceilings, total land holdings have mostly been divided up, according to the shares of the component units and have been distributed among relatives, but family ties have tightened simultaneously to prevent a real break-up of the joint family. Among the poorer sections owning small holdings or doing share-cropping in rural areas and among the white-collar workers in towns, extended families are an exception rather than the rule. The integrity of the joint family system is, on the whole, declining owing to rising prices; unmanageable growth of family members, better employment opportunities in areas away from the ancestral seats etc.

Home life: size of households

A sample survey covering 20% of the households in the district, carried out during the 1961 Census throws interesting light on the size of households in the rural and urban areas of the district.

TABLE SHOWING RANGE OF MEMBERS IN 20% OF RURAL AND URBAN HOUSEHOLDS IN HOWRAH DISTRICT IN 1961

Nature of Households	Total No. of Sample Households	Size of Sample Households				
		Single Member Households	2-3 Member Households	4-6 Member Households	7-9 Member Households	10 Members and over Households
TOTAL	77,475	8,139	19,159	29,622	14,185	6,370
Rural Areas	44,975	2,987	9,742	18,730	9,457	4,059
Urban Areas	32,500	5,152	9,417	10,892	4,728	2,311

Dwelling houses

Nearly 60 years ago O'Malley and Chakravarti observed: "The materials used for the dwelling of a well-to-do shopkeeper consist simply of mud walls and wooden posts supporting a thatched roof. His house usually comprises three to five one-storied rooms, with a shed or large verandah outside for the reception of visitors. The homestead is surrounded by an enclosure, and the cost of the whole building is about Rs. 500 to Rs. 1,000. The furniture met with in such a house consists of several kinds of brass or pewter utensils for cooking, eating and drinking; some earthen pots for cooking; one or two earthenware water jars: a few wooden stools, a few mats, and a *takhtposh* or two, i.e., plank bedsteads of coarse construction. The dwelling of an ordinary husbandman is much smaller and less substantial, being composed simply of mud, straw, and bamboos, it usually consists of two or three rooms, and the furniture, if so it may be called, consists of a few brass and earthenware vessels, a stool or two, and a few mats for sleeping on. Some of the richer husbandmen also possess a large strong-box, in which they keep their clothes and whatever valuables they possess, such as their wives' ornaments, rent receipts etc. In the towns brick-built houses or tiled

huts are now general. An ordinary *pakka* house, if single-storied, costs Rs. 2,000 to Rs. 3,000, and if double-storied, Rs. 3,000 to Rs. 6,000 in the towns and two-thirds of this amount in the mofussil. The number of *pakka* houses has considerably increased of late years in the villages of thanas Dumjor (Domjur) and Jagatballabhpur."[1] The picture remains more or less the same today except for the fact that house building costs have meanwhile gone up beyond measure. While *pucca* houses have increased in number in the urban areas, the mud-and-thatch huts are still the rule in villages.

Settlement pattern

The settlement pattern of the recent migrants to the district shows that the towns are being bypassed in favour of their environs. The suburbs of Howrah city are rapidly growing in size and population density in spite of severe dearth of housing, sanitation, transport and other amenities. "The urbanized area is characterized mostly by its lack of a distinct land use pattern. By and large, the major industries are located along the river bank, but small industrial units are found scattered throughout the city. Commercial uses are strung out along the major roads, and literally hundreds of small individual retail operations are to be found almost everywhere. The residential areas, though concentrated at very high population densities in the central part of Howrah, are also scattered throughout the urbanized area under environmental conditions that are generally deplorable. Public facilities are almost non-existent. The overall impression of Howrah is one of squalor and disorder. Evidence over the past ten years indicates that the railways no longer confine urban growth and, beginning with the placement of several major industries in the rural areas to the west, the urban growth pattern has started to shift."[2]

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[1] op. cit. p. 33.

[2] Calcutta Metropolitan Planning Organization—Howrah Area Development Plan, 1966-86. Calcutta, 1967. p. 6.

CHAPTER IV

AGRICULTURE AND IRRIGATION

LAND RECLAMATION AND UTILIZATION

"Of all the districts in Bengal, Howrah is the least dependent on agriculture for the support of its population. It is practically a metropolitan district, a large proportion of its inhabitants obtaining employment in the adjoining city of Calcutta and in the numerous industrial concerns along the Hooghly. These concerns are situated in the long riparian strip of high land which stretches from the Bally *Khal* on the north to the mouth of the Damodar on the south. It contains the populous city of Howrah and the town of Bally, and below them are numerous mills, brick-fields and scattered homesteads. Even in the interior the villages tend to be semi-urban in character, and the villagers contribute largely to the artisan class."[1]

The city of Howrah, the second biggest in West Bengal, is inhabited by more than a quarter of the total population of the district which is mainly employed in non-agricultural callings. The rest of the district consists of 787 inhabited villages of which as many as 210 are in the urbanized Sadar subdivision while the remaining 577 are in Uluberia, a comparatively rural subdivision. In 1961, the average agricultural holding in the district was not larger than one acre per capita and its trend may be said to have registered a steady decline since then.

According to the District Settlement Report of 1934-1939, 71% of the total area of the district was under cultivation while 6% remained fallow. Fallow lands occurred most frequently in Amta P.S. and the least in Bauria thana. In spite of the prevalence of such lands, 69% of the total area of the Amta police station was cultivated. The statement below shows the double-cropped area in the different thanas of the district as against the total cultivated area obtaining in 1934-39.

Name of thana	Total cultivated area (acres)	Total double-cropped area (acres)
Amta	70,599	8,228
Bagnan	30,865	3,992
Bauria	1,240	163
Syampur	59,523	16,896

[1] L. S. S. O'Malley—Bengal District Gazetteers: Howrah, Calcutta, 1909. p. 65.

Name of thana	Total cultivated area (acres)	Total double-cropped area (acres)
Uluberia	36,380	2,596
Baly	6,939	946
Domjur	18,488	1,608
Jagachha	2,365	185
Jagatballavpur	24,937	778
Panchla	14,678	1,642
Sankrail	11,284	1,646
Sibpur	20	—

According to statistics for 1951-52, out of the district's total area of 3,58,464 acres, the net cropped area was 2,52,500 acres (in round figures) excluding 78,700 acres not available for cultivation, 19,300 acres of uncultivated land excluding current fallows and 7,600 acres of current fallow lands. Of the total cultivated area, about 1,800 acres were irrigated from private canals, 1,000 acres were irrigated from tanks and 2,000 acres from other sources. The crops irrigated were only 50 acres of cereals (other than rice and wheat) and pulses, 400 acres of sugarcane and 3,200 acres of other food crops.[1] The following statement would give an idea of the extent of land utilization in the district for the period from 1954-55 to 1958-59.[2]

	Area in thousand hectares				
	1954-55	*1955-56*	*1956-57*	*1957-58*	*1958-59*
Area not available for cultivation	33.8	34.4	35.2	35.3	35.6
Other uncultivated land excluding current fallows	6.5	6.3	4.9	4.0	3.7
Current fallows	7.6	7.8	14.3	11.8	13.3
Net area sown	97.2	96.6	90.7	94.0	92.5
Area sown more than once	16.8	17.1	16.6	14.3	14.1

It has been stated that "practically all the land at present cultivable has been brought under the plough and that very little land is left fallow. It would seem, moreover, that the area under rice and jute is steadily increasing. The lands reclaimed by the three drainage schemes (Howrah, Barajol, and Rajapur) have been almost exclusively devoted to winter paddy, while the *suna* lands that grew autumn rice have been devoted almost entirely to jute. Sugarcane cultivation is declining

[1] Census 1951, West Bengal District Handbook: Howrah. Calcutta, 1953. p. xxvi.

[2] Source: Statistical Abstract: West Bengal. 1961.

owing to the competition of imported sugar and molasses, while the cultivation of vegetables and fruits is on the whole increasing."[1]

Conditions in the district are, on the whole, favourable for agricultural pursuits. The rich alluvial soil receives occasional deposits of fertilizing silt from the overflow of the three main rivers—Bhagirathi, Damodar and Rupnarayan. The land between these rivers lies very low and has to be protected from ordinary floods by embankments, while creeks and swamps occur all over the district so that a large area lies uncultivated. Steps have been taken in recent years to reclaim cultivable waste lands through various schemes. According to the Land-Use Survey of 1951 undertaken by the Department of Geography of the University of Calcutta, about 6,930 acres of good arable land was found to be unutilized in the district excluding the newly formed *char* lands or current fallows. Details of this survey, given elsewhere under the present Section, indicate that there are still some cultivable waste lands in the district which can be brought under the plough though such reclamation may not be economic in all cases.

The following table gives the cultivated and uncultivated area of the district for the years 1960-61, 1961-62 and 1962-63.

LAND UTILIZATION IN HOWRAH DISTRICT: 1960-63

(in thousand acres)

	1960-61	1961-62	1962-63
Total area of the district	358.5	358.5	358.5
Area under forest	—	—	—
Area not available for cultivation	90.2	90.5	90.9
Other uncultivated land excluding current fallow	9.2	9.0	10.5
Current fallow	10.5	7.2	21.5
Net area sown	248.6	251.8	235.6
Total cropped area	295.6	316.2	283.7
Area sown more than once	47.0	64.4	48.1

The pressure of population is so high that the pattern of land utilization changes from year to year. With the gradual urbanization of the interior tracts over the years, more and more waste lands are being reclaimed for construction of roads, buildings and factories or the setting up of brick-fields while more and more areas come under double or multiple cropping. The cropped area also varies from year to year under these changing conditions. It may, however, be broadly said that about 75 per cent of the total area of the district is now cultivated and another 4 per cent is culturable waste.

[1] Census 1951, West Bengal District Handbook: Howrah. Calcutta, 1953.

In 1963-64, Howrah had only 3,58,500 acres of land—the smallest for any district in West Bengal. The soil, which used to be quite fertile in the past, is not very rich now since over a long period of time it has been deprived of the benefit of silt deposits through occasional floods and also because cultivation has been carried on without proper application of manure or rotation of crops. With the formation of embankments along the courses of practically all the important rivers of the district, the frequent supply of silt during the rains has been withheld. And this process has been accentuated with the construction of the dams of the Damodar Valley Corporation, one of the main objects of which is to control floods. With the rising of the river beds, the embankments had also to be raised higher with the result that after the recession of an occasional heavy flood, water lying over the fields could not be drained out leading to extensive water-logging and consequent harm to agriculture.

Be that as it may, it has already been noted that during the land-use survey conducted in 1951 by the Department of Geography of the Calcutta University, 6,930 acres of good arable land was found lying unutilized in the district. Due to its close proximity to the Howrah industrial area, rehabilitation of displaced persons was arranged on them in 1952-53 in compact area especially within the Baly and Sankrail police stations. Some of it has also been devoted to horticulture in recent years. Certain parcels of such land in Domjur and Jagatballavpur are being taken up for vegetable growing. Some of the old and newly formed *chars* in the principal rivers are also lying unutilized. Cultivable but idle lands also exist in Panchla, Bagnan, Baly, Lilua, Bauria, Domjur and Jagachha thanas; those in the latter two police stations being well suited for agriculture. According to latest available information it appears that idle lands ranging from 50 to 100 acres exist at the villages of Sarenga, Manikpur and Jhorhat in Sankrail police station; Shyamsundarchak, Chengail and Jagadishpur in Uluberia, Kushberia and Tajpur in Amta and Bhandardasha and Dafarpur in Domjur.

Recovery of swamps

"If all *dobas* and submarginal lands are reclaimed and fallow lands put to proper uses, Howrah district would gain 26,380 acres of productive land, which would represent about 8 per cent of the total area of the district."[1] This assessment was made as early as in 1952 and since there has been no subsequent survey in the district, it is not possible to say the present extent of submarginal land under swamps and marshes. A point to be noted in this connexion is that the swampy areas are scattered in small blocks all over the district making it uneconomic for an overall attempt at their reclamation. That is precisely why nothing much has been done so far to this end.

Clearing of forest has not been necessary in Howrah district for

[1] S. P. Chatterjee—Geographical Review. September 1952.

bringing further land under cultivation for the simple reason that there is very little forest here. Soil erosion is also not a problem in this district and there is nothing to report on this point.

IRRIGATION

River irrigation

With a gradual rise towards the north-west, the district is mostly composed of the alluvial formation of the three rivers—the Bhagirathi in the east, the Rupnarayan in the west and the Damodar in the centre. They form the primary sources of water supply in the district. Other sources of irrigation are the Government canals (including the D.V.C. network), private canals, tanks, wells, swamps and drainage channels. The following statement shows the area irrigated from various sources in the district during the period from 1949-50 to 1952-53.[1]

Area in acres

Sources	1949-50	1950-51	1951-52	1952-53
Government canals	—	—	120	1,140
Private canals	1,800	5,000	22,390	34,780
Tanks	1,000	1,500	1,500	1,500
Wells	—	—	—	—
Other sources	2,000	5,000	8,000	15,000
Total	4,800	11,500	32,010	52,420

In more recent years, there has been a substantial increase in the acreage irrigated from most of these sources. This is borne out by the following table covering the period from 1959-60 to 1962-63.[2]

Area in acres

Sources	1959-60	1960-61	1961-62	1962-63
Government canals	—	1,900	4,300	3,300
Private canals	43,000	43,800	44,000	44,100
Tanks	1,400	1,300	1,400	1,400
Wells	—	—	—	—
Other sources	13,400	13,500	13,600	13,300
Total	57,800	60,500	63,300	62,100

The ancient irrigation system of Bengal,[3] which declined with the fall of the Mughal Empire, consisted of dug out canals carrying the crest of water of the river floods, rich in fine clay and free from coarse sand. These canals were long and continuous and fairly parallel to and more or less equidistant from each other for the purpose of

[1] Source: Socio-Economic & Evaluation Branch of the Department of Agriculture and Community Development, Government of West Bengal.
[2] Source: Same as before.
[3] W. Wilcocks—Ancient System of Irrigation in Bengal, Calcutta, 1930.

irrigation. Cultivation dependent on monsoon alone was deprived of the fertile alluvium carried by the rivers. So, when the rivers were in spate in the rainy season, the water available from these two sources were mingled for utilizing the alluvium for crop production by means of overflow irrigation. This overflow also destroyed the breeding grounds of mosquitoes, thus combating malaria to a great extent. Wilcocks has attributed all the past glory and prosperity of Bengal to this overflow irrigation system and has suggested that restoration of this time-honoured process would help tackle the problems affecting agricultural production in Bengal. As pointed out by him, this type of irrigation was ensured by making cuts in the banks of the canals which were closed when the floods were over.

Irrigation in Howrah district is practised on a limited scale. Aman rice, the staple crop raised on lands below or at flood-level, requires no irrigation except in exceptional years of drought. Jute, the second crop of economic importance, grows and is cut during the rains when there is ample moisture. Sugarcane, potatoes, brinjals, betel leaf and spring rice (*boro*) requiring artificial water supply generally grow after the rains. The following passage gives an idea of the irrigation system as it existed in the district during the first decade of the present century: "The important winter rice crop usually receives a sufficient supply of water from the overflow of the rivers, but water from the canal and from the drainage channels is also used for irrigation. It is taken in from the Hooghly (Bhagirathi) at spring tides and is held up by means of lock-gates in the canal, as well as in the drainage channels, being supplied to the cultivators, on application, by the Public Works Department. Otherwise, irrigation direct from the rivers and creeks is rare, unless the fields to be watered are nearly on the same level. Occasionally, however, some of the smaller creeks are dammed up, thus raising the water-level and impounding a supply for the dry months. The spring rice is also often irrigated from swamps, on the banks of which it is grown. Sugarcane and betel-leaf are generaly irrigated from adjoining creeks or tanks, as they require a large supply of water. ...There is comparatively little canal irrigation. Ordinarily an ample supply of water can be had from other sources, and in the summer, when the latter sources dry up, the canals also contain very little water. There is, however, a considerable demand for canal water just after the rains, if the monsoon has been deficient in strength. The drainage channels, which traverse the lands at a very low level, are probably of more use, because in years of scanty rainfall water can be brought along them from the Hooghly river in the critical months of September and October."[1] Since O'Malley's time, canal irrigation in the district has been considerably extended through the extensive network of feeder channels constructed by

[1] L.S.S. O'Malley and M. Chakravarty—op. cit. p. 67.

the Damodar Valley Corporation which are described in a subsequent section.

Well irrigation

Well irrigation is not much practised in the district though the water level is only a few feet below the surface. Well water is used chiefly for orchards and for drinking and household purposes.

Lift irrigation

Water is raised from wells by means of buckets or earthen pots tied to a rope, occasionally put round a pulley fixed to a cross-bar resting on supports. The usual mode of lifting water from water channels etc. is by means of canoe-shaped iron *dongās* propelled by hands and feet which are a common sight in the villages. Towards the end of 1966 a lift irrigation scheme employing modern apparatus was introduced in the Amta and Uday Narayanpur Blocks under which two pumping sets were installed for supplying river water to the neighbouring fields. The total area already covered by it is 200 acres; when in full operation, it will benefit some 750 acres of land.

The following table[1] shows the areas in the district under different crops during selected years over the period from 1950-51 to 1962-63.

Name of crops	Area in acres					
	1950-51	1951-52	1952-53	1960-61	1961-62	1962-63
Rice	6,000	32,950	49,500	56,800	58,500	58,000
Wheat	—	—	—	—	—	—
Other cereals & pulses	100	100	100	500	600	500
Sugarcane	2,500	800	400	300	500	400
Other food crops	5,000	2,320	2,500	4,000	4,100	4,500
Other non-food crops	1,000	50	25	—	—	—
Total	14,600	36,220	52,525	61,600	63,700	63,400

It will be seen from the above table that although the irrigated area under other crops has either shown a slight rise, remained more or less constant or considerably decreased (as in the case of sugarcane), there has been a phenomenal increase in the irrigated acreage under rice over the period under review.

The D.V.C. command area

The total area in the district commanded by the canal network of the Damodar Valley Corporation comprises 56,385 acres falling within the Amta, Jagatballavpur and Domjur police stations. It has not yet been possible to arrange supply of irrigation water throughout the command area but the excavation of canals and construction of canal structures have made considerable progress during the last few years. Leases were executed for the supply of irrigation water to about 2,731 acres during the *kharif* season of 1961-62, the area bene-

[1] Source: Socio-Economic & Evaluation Branch of the State Department of Agriculture and Community Development, and S. N. Mukherjee—A Brief Agricultural Geography of West Bengal. Calcutta, 1956.

fited in Amta and Jagatballavpur police stations being 2,215 acres and 516 acres respectively. The area in these two thanas which actually received irrigation water during the *kharif* season of 1962-63 was 2,112 acres of which 1,822 acres were in Amta and 290 acres in Jagatballavpur. No D.V.C. canal water was available during the *rabi* seasons of 1961-62 and 1962-63. But from 1963-64 such supplies are being made both for the *kharif* and *rabi* seasons as shown in the following statement:

Year	Police station		Area (in acres) irrigated during season	
			Kharif	*Rabi*
	Amta		2,272	401
1963-64	Jagatballavpur		454	266
	Domjur		—	135
		Total	2,726	802
	Amta		2,496	418
1964-65	Jagatballavpur		454	266
	Domjur		—	137
		Total	2,950	821
	Amta		3,443	1,074
1965-66	Jagatballavpur		454	565
	Domjur		—	138
		Total	3,897	1,777
	Amta		6,246	Not available
1966-67	Jagatballavpur		879	
	Domjur		—	
		Total	7,125	

The cropwise irrigation during 1965-66 is given below both for *kharif* and *rabi* seasons:

Kharif season		*Rabi* season	
Name of crop	Area (acres)	Name of crop	Area (acres)
Aman	3,897	Potato	510
		Boro	889
		Onion	104
		Other	274
		Total	1,777

Tanks

There were about 1,000 tanks in the district in 1948-49 and the number remained more or less the same for the subsequent two years. In 1955-56 the tanks numbered 1,600.[1] More and more tanks have since been improved as an aid to agriculture and provisions have been made in the Block budgets to extend financial assistance to the owners of tanks under certain conditions. Apart from the aid available from the Tanks Improvement Department, loans may also be given under Miscellaneous Agricultural Schemes out of the Block budgets. The terms of all these loans have also been liberalized in recent years. In fact, since 1940 when tank improvement work was seriously taken up in the State, a large number of derelict irrigation tanks have been re-excavated. In those districts where intensive rice cultivation schemes have been taken up, considerable progress has been achieved in regard to tank improvement work in recent years. Howrah district is not included in the Intensive Rice Cultivation Scheme but the work of improvement of irrigation tanks has already made some progress. The Bengal Tanks Improvement Act of 1939 came into force in the district with effect from 1959 but actual work started only in 1960-61. In that year 8 irrigation tanks in the district were improved at a cost of Rs. 56,587 providing irrigation facilities to 126 acres of land. During the Third Plan period, 72 derelict tanks were re-excavated at a total expenditure of Rs. 2,45,608 benefiting 737 acres.

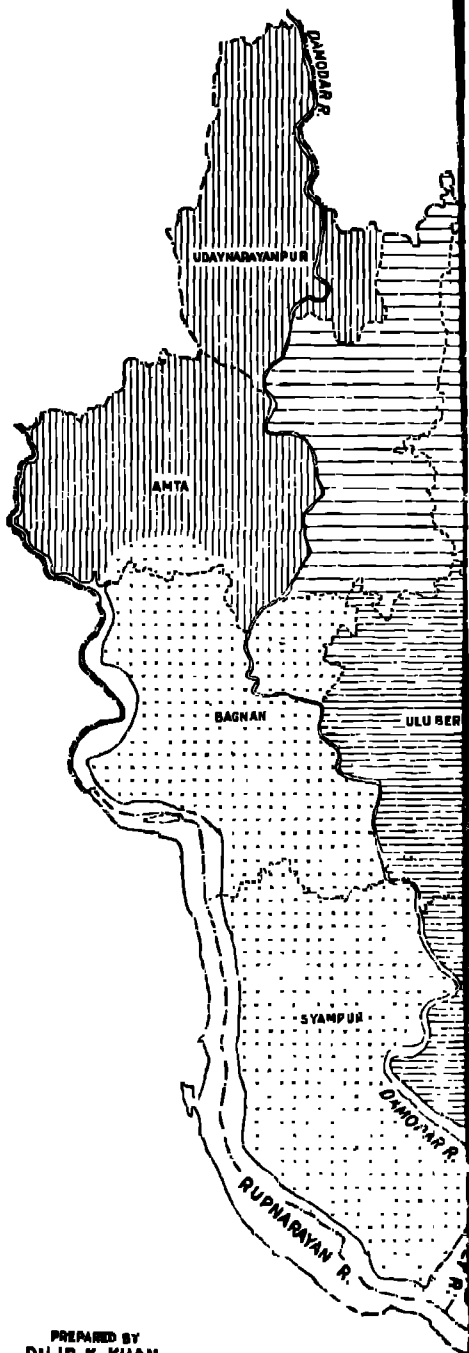
Deep tube-wells

Deep tube-wells have been thought of as a very effective alternative source of irrigation in areas not served by any river valley project. In Howrah district as many as 15 deep tube-wells were installed up to May, 1967 of which only two were in operation while the others were yet to be energized by the State Electricity Board which combines this project with its rural electrification programme. Each tube-well is expected to irrigate about 200 acres of land. The water-rate is reasonable and supplies are available for *kharif*, *rabi* and intermediary crops all the year round.

Agriculture including Horticulture

Soils and Crops: nature and variety of soils and their suitability for cultivation of different crops

The low lying plains of the district, entirely built up by the combined alluvial deposits of the Hooghly, Damodar and Rupnarayan rivers, are still in an active stage of formation and thus bogs and marshes are conspicuous features of the landscape which presents a great contrast to the northern plains of Burdwan and Birbhum districts. River-borne alluvium and micro-topography play an important part in the development of soils of this region. The low flood plains receive thick blankets of sediments regularly while areas at higher elevation remain partially or entirely unaffected. The fundamental pedogenic processes of eluviation and illuviation (i.e. leaching and deposition), give rise to different soil types and the effect of topography is either to accelerate or retard the pedogenic processes. In the very low lying

[1] Source: Statistical Abstract, West Bengal, 1961.

DAMODAR R.
UDAYNARAYANPUR
AMTA
BAGNAN
ULU BER
SYAMPUR
DAMODAR R.
RUPNARAYAN R.
PREPARED BY
DILIP K. KHAN.

areas, where the level of the ground water is very near the surface or where this level fluctuates according to the seasonal rhythm of precipitation, typical hydromorphic soils[1] (i.e. bog soil, peat, meadow or turf meadow soil etc.) form with typical profile characteristics. The influence of ground water is more powerful than other factors in the formation of hydromorphic soils. *Per contra*, the alluvial terraces under normal conditions, will allow free profile drainage resulting in both mechanical and chemical eluviation of the surface horizons and in the deposition of calcium carbonate and sesqui-oxides in the subsoil horizons; the degree of such deposition depends upon the period of undisturbed profile building. These soils in course of time undergo

[1] A Soil profile representing Hydromorphous meadow soil (clay loam) from Fatepur in the Amta P.S.

Relief: Flat plain, away from the Damodar but at the level of low flood plain and regularly inundated.

Drainage: Free drainage during low rainfall period but seasonal impedance during rainy season with rise of water table.

Parent material. River alluvium.

Vegetation: Paddy (single *Kharif* crop); stubble left in the field after harvest.

ANALYTICAL DATA (Values in %, if not stated otherwise)

	Depth below the surface					
	0-6"	6-12"	12-24"	24-36"	36-48"	Below 48"
Coarse sand	18.18	1.00	0.90	3.30	4.40	—
Fine sand	31.2	34.6	42.4	55.2	61.6	—
Silt	22.6	34.8	22 !	18.4	16.2	—
Clay	24.5	27.6	32.3	21.7	16.4	—
Organic matter	2.00	1.08	1.12	0.70	0.69	—
Moisture (Hy.)	0.90	0.92	1.18	0 70	0.69	—
pH	6.5	7.5	7.4	7.3	7.0	7.5
$CaCO_3$	—	—	—	—	—	—
Free Fe_2O_3	4.8	5.4	6.3	5.0	3.1	Not established
Base exchange capacity per 100 gms. of soil (in me.)	14.3	—	—	—	48.2	—
SiO_2/R_2O_3	2.01	—	—	—	2.24	—
SiO_2/Al_2O_3	2.52	—	—	—	2.62	—

an 'azonal* to zonal' transformation and typical automorphous soils[1] of the climatic belt to which the region belongs develop. Where

* i.e. soils without developed profile characteristics.
[1] Automorphous soil of low terrace: Vill. Palagaria, P. S. Syampur.
Relief: Flat plain slightly sloping towards the west.
Drainage: Moderately good with seasonal impedance.
Parent material: River alluvium.
Vegetation: Paddy (single *Kharif* crop); stubble left in the field after harvest.

ANALYTICAL DATA (% if not stated otherwise)

	Depth below the surface					
	0-6"	6-12"	12-24"	24-36"	36-48"	Below 48"
Coarse sand	0.7	0.8	1.1	1.1	0.6	0.3
Fine sand	29.5	22.6	15.7	15.2	17.7	17.6
Silt	37.7	41.4	40.5	37.3	38.9	36.4
Clay	30.0	33.4	40.94	44.34	40.99	43.62
Organic matter	1.50	0.86	0.75	0.86	0.62	0.76
Moisture (Hy.)	0.60	0.90	1.00	1.20	1.19	1.12
pH	6.7	7.2	7.2	7.4	7.6	7.7
$CaCO_3$	—	—	—	—	—	0.2
Free Fe_2O_3	5.4	5.9	6.8	7.0	6.6	6.2
Base exchange capacity per 100 gms. soil (in me.)	31.7	—	—	—	34.9	—
SiO_2/R_2O_3	1.59	—	—	—	2.17	—
SiO_2/Al_2O_3	1.89	—	—	—	2.77	—

Automorphous soil of high terrace: Vill. Oadipur, P.S. Domjur.
Relief: Gently undulating plain, sloping towards the south.
Drainage: Free drainage.
Parent material: River alluvium.
Vegetation: Bamboo groves.

ANALYTICAL DATA (% if not stated otherwise)

	Depth below the surface					
	0-6"	6-12"	12-24"	24-36"	36-48"	Below 48"
Coarse sand	22.00	2.2	2.8	2.9	1.6	1.1
Fine sand	21.4	7.7	11.6	35.4	17.0	6.7
Silt	43.0	50.9	55.8	17.2	43.0	60.0
Clay	29.7	36.5	26.8	39.0	27.0	22.0
Organic matter	2.84	1.46	0.95	1.02	1.26	1.26
Moisture (Hy.)	1.10	1.20	0.90	1.10	0.90	1.04
pH	6.6	7.5	8.5	9.1	9.3	9.2
$CaCO_3$	—	—	1.20	3.40	7.04	7.90
Base exchange capacity per 100 gms. soil (in me.)	38.4	—	—	—	35.7	—
SiO_2/R_2O_3	2.71	—	—	—	2.75	—
SiO_2/Al_2O_3	3.62	—	—	—	3.58	—

capillary transport of the groundwater in the profile determines the character, saline soils will result; under the same conditions meadow soils with turf or bog are also formed. But where the subsoil has an impeded drainage, decomposition under anaerobic conditions dominate giving rise to meadow and peat soils.

The texture[1] of these groups of recent alluvium varies from sandy loam to clay and at certain horizons gives rise to clay pan. Heavy clay loam soils (sticky when wet and hard when dry) occur in the north, while lighter medium textured loams (presence of large quantities of silt makes the soil feel like flour) are found in the south of the district where the deposits are more recent. The latter is considered better in respect of moisture holding capacity and aeration of plant roots. Coarse to moderately coarse textured soils (sands, sandy loam and loamy sands) occur along the river beds. The Fatepur clay loam is neutral in reaction and practically undifferentiated in respect of the transport of sesquioxides. It is also characterized by seasonal impedance of drainage due to proximate water-table. Where the site is very near the river and is submerged by floods, there may be a thin veneer of sand or silt but the subsoil is, in most cases, a stiff clay (especially along the silted up streams and in swamps) which makes drainage difficult. These soils belong to the group of low-terrace soils of which an illustrative example (village Palagaria) has already been cited. The Palagaria clay loam is very feebly ferralitic in character. The natural consequence of the open texture of the soils of the low terrace is that their water holding capacity is below the normal required for most of the cultivated crops. This explains the need for irrigational facilities for development of agriculture in this area. Soils of the high terrace type, as represented by the Oadipur soil, are texturally more or less of the same character with the added problem of leaching. Due to the loss of bases during the course of weathering, the surface of such soils has turned acidic (pH ranging between 5.0 to 6.5) but the subsoil is strongly alkaline with deposition of calcium carbonate. Free sesquioxide is also transported here down the profile and displays quasiferralitic character. Though, as such, the range of acidity is not absolutely lethal for most of the cultivated crops, yet great care should be taken while advising the farmers to use ammonium sulphate for increasing crop production. Application of compost is helpful, but better still is green manuring along with lime. The arable sandy soils are very low in regard to the level of organic matter, potassium and phosphorous. Apart from these, some soils are saline due to the effect of saline water from tidal inflow and chemical processes obtaining in the soils. Embankments to check the tidal inflow, sluice gates to drain out saline water after rains, addition of gypsum etc. are some of the reclamation measures. Careful selection of crops hardy

[1] Soil texture depends on the relative proportion of sand, silt and clay in the soil

enough to tolerate soil salinity is what should be advised for such tracts. Incidentally, many types of grasses could be cultivated in the saline areas with a view to developing dairy industry as has been done in the Polderlands of Netherlands, West Europe.[1]

"The cultivators have a long list of names for different classes of land, judged from various points of view, for they classify the soils according to its level, composition or yield. As regards level, it is called *jala* when below water-level (i.e., usually *sali* or paddy land), *suna* when above water-level, and *danga* at a higher level. On the highest levels there are *bastu*, or homestead land, and *udbastu*, or land immediately round the homestead. According to composition, the soil may be *bele* or sandy, *entel* or clayey, *penko* or muddy, *dhasa* or marshy, and so forth. According to yield, the *sali* and *suna* lands are divided into *awal* or first class, *doyam* or second class, *seyam* or third class, *chaharam* or fourth class, and so on, the terms being relics of the old Musalman classification."[2]

Boro rice is transplanted along the banks of marshes or in very low lands which remain sufficiently wet till summer making normal ploughing hardly necessary. In comparatively drier areas, irrigation facilities may increase the acreage under *boro* rice. Potatoes and vegetables like cauliflower, cabbage, radish, brinjal etc. are grown extensively on river banks.[3] It has been found that the light soils of Howrah district are eminently suitable for the cultivation of garden crops all the year round and require very little of land management.[4] Because of the salinity of the soil coconut trees are numerous in Syampur, Bagnan and Uluberia police stations adjacent to the lower reaches of the three main rivers Bhagirathi, Damodar and Rupnarayan. Some paddy and pulses are also raised on these saline soils. *Āus* rice is grown on *sunā* lands and prefers loamy soils. Sandy clay loam soils found in Dihi Bhursut and Uday Narayanpur areas (P.S. Uday Narayanpur) and sandy clay soils found in Debipur Anchal (P.S. Amta) are cultivated with *āus* paddy or jute or potato and *māskalāi* pulses. Sandy loam soils, found along the banks of the Damodar, are also given to *āus* paddy, jute and vegetables. Clay loam soils, occurring in the old Damodar basin, and in two patches in Jagachha and Domjur thanas and in the western portion of the Amta police station were devoted exclusively to *āus* cultivation in former times. It has now been replaced by jute and in some *dāṅgā* land by market gardening. The practice is gaining ground to grow jute in *Āman* lands and to harvest it before the rice seedlings are transplanted

[1] R. Lahiri—'Soils of the Lower Damodar Region' in Essays in Geography. Calcutta, 1965. pp. 22-31.
[2] L. S. S. O'Malley and M. Chakravarty—op. cit p. 68.
[3] S. P. Chatterjee—'Land Utilization Survey of Howrah District' in Geographical Review of India, Vol. XIV, September, 1952, No. 3. p. 5.
[4] S. N. Mukherjee—'The Soils of Howrah' in Geographical Review of India, Vol. 20, December, 1958. p. 91.

there. Loamy soils of Baly, parts of Domjur, Jagatballavpur, Syampur, Bagnan and Uluberia police stations are given to *āman* paddy cultivation. *Āman* paddy is most successfully cultivated on clayey soils found only on the south-eastern part of the district which do not favour jute cultivation. Silty clay, found in the Kalyanpur Anchal of Bagnan police station, and silty clay loam occurring in a band from the Gaighata *Khal* along the Damodar up to Uluberia are also given to *āman* paddy.

To make the best use of soils, crop rotation and mixed farming are the usual practices followed in this district. For example, jute or autumn rice is rotated with pulses of better quality, namely *mug*, *maṭar* and *musuri; āman* paddy with *khesāri* and sugarcane with jute and pulses. Where conditions are unfavourable as in Uluberia and Jagatballavpur, large tracts of *āman* land are kept fallow to allow the soil a period of rest. The following table would give an idea of the customary rotation of crops followed in various parts of the district.[1]

Name of Thana	pH range	Soil Colour	Water Level (Depth in feet)		Crop Rotation Followed
			Summer	Rains	
Amta & Uday Narayanpur	5.9-7	Yellowish brown to ash grey	15 40	6-20	*Āus* or jute-*āman*; potato-*āus* or jute; *āus-rabi-āus*; *āman*-vegetable-*āman* and jute-*āman*-jute
Bagnan	6.5-7.5	Reddish to olive grey	12-19	2-6	*Āman-khesāri-āman*; jute-potato or vegetable-jute; jute-potato-*āus* or jute; *āman*-fallow-*āman*
Syampur	7-8.5	Olive grey to light black	10-14	Surface to 5	*Āman-khesāri-āman*
Domjur	6.8-8.2	Black, dark grey, grey-brown, olive brown	10-20	2-7	*Āman-khesāri* or vegetable-*āman*; jute-potato or wheat-jute; jute-*rabi*-jute
Uluberia	7.3-7.8	Olive grey, brownish grey to blackish grey	10-18	2-6	*Āman*-fallow-*āman*; *āman-khesāri* or fallow-*āman*
Sankrail	5.5-6.0	Grey-brown	18 (appx.)	3 (appx.)	*Āman-khesāri-āman*
Jagatballavpur	5.5-7.3	Dark grey to brownish grey and even black	10-12	2-12	*Āman* or *āus*-vegetable or gram; *āman*-vegetable or grain-*aman*, *āman*-fallow-*āman*

[1] Source: Classification, composition and description of soil profiles of West Bengal, Technical Bulletin No. 6 published by the Government of West Bengal in 1965, pp. 838-64.

The Directorate of Agriculture, Government of West Bengal found out from a field survey that fertilizers and manures are rarely used and in most cases where they were used, the local opinion about them was unfavourable or non-committal. Only the villages Pati-Bhairabi and Sadasibpur of Bagnan and Syampur thanas respectively, i.e. only 2 out of the 20 localities reported, were definitely in favour of using fertilizers.[1] In the saline tracts, algal growth, popularly known as *Rushna* or *Ganji* reduces the yield of paddy. Application of 4 to 6 lbs. of copper sulphate per acre has been suggested as a solution to this problem.[2]

Major and subsidiary crops

Rice

Rice is the staple crop of the district and *āman* forms its principal variety. While various types of rice are grown in the district, the crop may be grouped under three main categories according to the harvest seasons, namely *boro* or spring, *āus* or autumn and *āman* or winter rice. *Boro* rice has the smallest area under its cultivation. This is due to the fact that the paddy is coarse and that only a small area is fit for its cultivation. *Boro* seedlings are transplanted along the banks of marshes or in very low lands which remain wet till summer Ploughing is usually not required. It is sown in January and reaped in April and May. Normally the area under *boro* rice is about one-third of that under *āus* paddy.

Āus or autumn rice is coarse and inferior in taste and is consumed mainly by the poor. Its name is derived from the Bengali word *āsu* meaning quickness which implies that a very short period is required for its maturity. *Āus* rice is sown, chiefly broadcast, on *sunā* lands and preferably loamy soils. It is sown in May and reaped in August and September, being often followed by a crop of pulses. Formerly *āus* used to be a fairly large crop but it has since been partly replaced by jute which is a better cash crop. The cost of cultivation of *āus* rice is almost the same as that of *āman*, for although it requires less ploughing, it needs much more care for proper weeding. *Āus* requires early rains and would suffer for want of it.

Āman rice is the main crop of the district and grows on lands lying below flood-level, except where water lies so deep as to preclude its cultivation. The land which gets an adequate quantity of rain or canal water and has most of the detritus washed off its surface is naturally the richest and is commonly known as *awal* which is best suited for *āman* cultivation. Above or below the level of the *awal* lies the *doyam* or second class land. "In a year of excessive rain the upper *doyam*, and in a year of drought the lower *doyam*, will be as good as *awal*, but in a year of average rainfall the *awal* will be better than either."[3] Above and below the *doyam* are the zones of inferior land not suited for the cultivation of *āman* rice. Sowing and transplantation are both

[1] ibid. pp. 847 & 852.
[2] Source: Director of Soil Conservation, Government of West Bengal.
[3] L.S.S. O'Malley and M. Chakravarty—op. cit. p. 69.

practised but transplantation is the normal procedure covering above 75% of the total acreage. O'Malley gave the following account of *āman* cultivation in the district in the old Gazetteer of 1909:

"In the north the ground is frequently manured with cowdung (50 baskets to a bigha) except in the lower lands, where manure would be dissipated in the water. After manuring, ploughing begins, as soon as the ground has been sufficiently softened by rain, towards the end of winter or in the beginning of spring. There are generally four ploughings before sowing or planting. The clods are then pulverized by drawing a *mai* or harrow over them. *Aman* rice may be sown broadcast, but is more usually sown in a nursery and transplanted into the fields. It is sown in May and June, and is transplanted in the rains, chiefly in July and August. ... Harvesting begins on highlands in November or December and is mostly finished by the end of January. On the lower grounds it continues till the end of February and sometimes till the middle of March."[1] The average outturn of *āman* rice per *bighā* of *awal* land is estimated at 7 to 10 maunds of paddy and one *kāhun* of straw, and 5 to 8 maunds of paddy and the same quantity of straw if grown on *doyam* land. The outturn also depends on weather conditions and the care given to cultivation.

It would be interesting to list the local names of various kinds of rice grown in the district under the three broad categories of *boro*, *āus* and *āman*. One of the *boro* varieties is known as *sete* and is largely cultivated in Amta police station where *āman* paddy cannot be grown due to the presence of excessive flood water. The crop matures within 70 days, and is grown in spring after the flood water subsides. *Āus* is of three varieties of which *jebri* is an early type with drought resistant properties maturing within 80 days Another variety is *begri* or *halam* cultivated mostly on the Damodar *chars*. The third variety is known as *kumirgor*, *akundi* or *malgor*. *Āman* has many varieties, namely (*i*) *patnai*, which gives very good yield and can stand salinity of the soil to a certain extent, (*ii*) *rupsal* which can stand salinity of the soil and is largely cultivated in Syampur P.S. for its fine quality and satisfactory yield, (*iii*) *sitasal* which is finer than *rupsal* but can be raised in similar land, (*iv*) *jhingasal* which is a drought resistant type, (*v*) *halam*, *sashi balam* which are medium varieties of sufficient yield and (*vi*) *chamarmani*, *kachua*, *bhasamanik*, *kalamkati*, *raghusal*, *dudkalma*, *bhasakalma*, *latisal* etc. which are raised in various parts of the district.

Flood resistant varieties of paddy are particularly prized in the Howrah district, large parts of which get water-logged after the rains. *Pankalas*, *bakui*, *meghi*, *adharmoni*, *agunshi*, *lalkalma*, *arjunsal* and *kutherhana* are such varieties adored by local cultivators. *Ora* is

[1] loc. cit. p. 69-70.

another deep-water type which can withstand complete submergence even for three or four days.[1]

Pulses

Next to rice, pulses are the most important food grains. Gram, *khesāri*, *muq* and *musuri* are the favourite varieties. *Khesāri* is usually grown along with *āman* paddy on the same plots. It is sown broadcast in October, grows slowly till the winter paddy is harvested, then shoots rapidly and is gathered in February. It requires no ploughing and therefore the cost of cultivation is almost nil. It is, however, of inferior taste and is used mainly by the poorer people. The outturn is about three maunds per acre. *Mug* and *musuri* form the second crops on *sunā* lands and are generally consumed by the upper classes in society. They are sown in November and reaped in March. *Musuri* needs more care in ploughing and sowing and is grown mostly in Amta, Domjur and Panchla thanas. *Mug* is a pulse of superior quality but the yield is rather low. It grows best in sandy loam. The Gazipur Anchal in Amta P.S. is noted for its production.

Oil-seeds

Oil-seeds such as linseed, *til*, rape and mustard, are cold-weather crops grown only in small plots on high lands around village sites and on river *chars* which are periodically fertilized by new silt.

Other food grains

Gram is a kind of pulse which is also used as fodder. It is grown extensively in Amta thana. Barley, wheat and maize require cool and dry climatic conditions for their growth and, therefore, do not thrive well in this district. The acreage under these crops in the district is almost insignificant.

Jute

Jute is the most important cash crop of the district. During the post-Independence period, the acreage under jute has considerably increased due to the stoppage of import of raw jute from East Pakistan. From 5,170 acres in 1947-48, the jute acreage of the district increased to 10,380 in 1949-50 and to 20,700 in 1951-52. As this extension in jute acreage was taking place mainly at the expense of rice cultivation, steps were initiated to curb this tendency and the acreage fell to 10,400 in 1953-54, to rise again to 18,000 in 1954-55. Thereafter, jute acreage in the district has widely fluctuated from 10,500 in 1960-61 and 20,700 in 1962-63 after which year it gradually fell to the low figure of 11,600 in 1966-67. (The yearwise acreages are given in a statement at the end of this Section).

In Howrah district, *sunā* lands which formerly produced substantial quantities of *āus* paddy are being used now for jute cultivation. This crop when grown on high land yields a superior quality of fibre. Its cultivation extends over a period of four months, from May to September requiring about 15 ploughings and 3 weedings. The stems are cut in September and steeped in water, and when sufficiently retted, the fibres are separated from the stalks. The outturn during normal years is about 16 maunds of fibre per acre and 30 bundles of

[1] Census, 1951, West Bengal District Handbook: Howrah. Calcutta, 1953. p. XXX.

sticks. Loamy soil is best suited for jute cultivation. It is, therefore, grown extensively on higher lands between the Damodar and the Kana Damodar where the soil is loamy. It is also raised on *sunā* lands bordering the eastern bank of the Rupnarayan. The northern parts of Amta thana produce some jute but its production is very limited in the southern thanas of Syampur and Uluberia. The soil given to jute cultivation is usually manured with cowdung or rich blackish earth dug up from the bottom of tanks and ditches. The yield per acre can be increased by applying chemical fertilizers. It is also possible to prevent wastage of seeds by adopting a linear pattern of cultivation, i.e. row-cropping which requires only about one-third of the quantity of seeds needed otherwise. This process can yield at least 18 maunds of fibre per acre with less labour and less cost of cultivation.

Sugarcane

Sugarcane is grown on *sunā* lands, preferably heavy clayey soils retaining moisture. Its cultivation is very exhausting to the soil and the agricultural process runs through a full year providing no scope for raising a second crop on the same land. This is a drawback for which farmers are reluctant to take up its cultivation. Irrigation is also necessary for this crop. The ground requires some 8 ploughings and the outturn in terms of *gur* is about 80 maunds per acre during a normal year. Amta and Panchla thanas grow sugarcane in sizable quantities. A few of the canes are sold in local markets but they are mostly crushed and the extracted juice converted into *gur* or molasses.

Tobacco & betel-leaf

Tobacco is a minor agricultural product of the district and is grown along river banks and on *char* lands. Betel-leaf is an important cash crop on which much of the district's economic prosperity depends. It is grown within bamboo enclosures with fences made of jute-stalks. The betel-leaf of Nunti and Bantul near Uluberia is famous for its special flavour. The average life of a pan *baroj* (betel-leaf plantation) is about ten years and it takes about two years to yield the first crop of saleable leaves. The following seven or eight years are fairly profitable to the cultivator in spite of his recurring expenses in addition to the big outlay that he has to make in the beginning. Previously, the cultivation of the betel-leaf was confined exclusively to the *Bārui* caste but of late persons of other castes including even Brahmins have taken to it because of the high profits earned.

Fruits

The principal fruits of the district are mango, plantain, coconut, jack, papaya, pine-apple and custard-apple locally known as *ātā*. Groves of mango and jack fruits are a common sight, especially in the sadar subdivision, the different varieties of indigenous mangoes being generally sweet. Pine-apples are raised on homestead plots and are largely grown in the Lilua and Domjur police stations. Papaya is grown around many homesteads while plantains are cultivated on an extensive scale, the usual varieties being *kā̃ṭhāli*, *martamān* and *chā̃pā*. Coconut is an important commercial crop of the district thriving particularly on saline soil found in the central and southern

parts of the district. The principal markets for this crop are Andul and Sankrail where the produce is assembled before despatch to Calcutta or to markets outside the State. Date palms are also grown yielding date sugar while limes, tamarinds, leechees, the Indian blackberry (*jām*), the rose-apple (*golāp jām*), the *jāmrul* and guava are found in gardens on the outskirts of towns.

Vegetables

Vegetables are grown around the villagers' homesteads, in private gardens, as also along the banks of rivers and *khāls*. Summer vegetables such as gourd, pumpkin, *jhingā*, *uchchhe* and *paṭol* are grown on *dāṅgā* land and with the increase in prices of vegetables in recent years, villagers feel encouraged to grow more of these crops. Amta is famous for its *paṭol*, brinjals, radishes and cucumbers and Santragachi for its *ōl* (arum). They are exported to other parts of the district as well as to Calcutta. The summer vegetables do not entail much cost. They, however, require the protection of hedges and call for occasional watering. Winter vegetables like brinjals, potatoes, cabbages and cauliflowers are also grown. Other vegetables like beans, cucumbers, sweet potatoes and onions are also raised for local sale as also for export to Calcutta.

Changes in the area under different crops

With the extension of irrigation facilities, there have been corresponding changes in the areas under different crops in course of the past few years. Between 1952-53 and 1955-56 several small irrigation schemes, mainly in the form of re-excavation of *khāls*, were implemented leading to additional yield of various crops. During this period the acreage under *kharif* crops mainly increased, that under *rabi* also benefiting to some extent. With the expansion of the D.V.C. canal network, a large number of villages within the Domjur, Amta and Jagatballavpur thanas have been provided with irrigation water resulting in relative agricultural prosperity in those areas. In 1966-67, 7,125 acres of *kharif* land was benefited by D.V.C. water, the target area in the district being 56,385 acres.

The following table[1] gives the area, yield per acre and total production of principal crops in the district during the period from 1959-60 to 1966-67.

AREA, YIELD PER ACRE AND PRODUCTION OF PRINCIPAL CROPS IN HOWRAH DISTRICT : 1959-60 TO 1966-67

	Aman Rice			*Aus* Rice		
Year	Area ('000 acres)	Yield (mds./acre)	Production ('000 tons)	Area ('000 acres)	Yield (mds./acre)	Production ('000 tons)
1959-60	149.6	5.67	31.2	2.7	12.27	1.2
1960-61	214.4	17.75	139.8	3.7	11.99	1.6
1961-62	215.5	11.82	93.6	2.1	7.14	0 6

(*contd.*)

[1] Source: Statistical Officer, Socio-Economic & Evaluation Branch, Department of Agriculture & Community Development, West Bengal.

AREA, YIELD PER ACRE AND PRODUCTION OF PRINCIPAL CROPS IN HOWRAH DISTRICT : 1959-60 TO 1966-67—*contd.*

	Āman Rice			*Āus* Rice		
Year	Area ('000 acres)	Yield (mds./ acre)	Produc-tion ('000 tons)	Area ('000 acres)	Yield (mds./ acre)	Produc-tion ('000 tons)
1962-63	202.9	11.04	82.3	2.8	9.76	1.0
1963-64	207.7	14.24	108.7	3.1	8.03	0.9
1964-65	209.0	13.64	104.7	2.6	11.36	1.1
1965-66	214.1	8.15	64.1	3.0	5.43	0.6
1966-67	211.5	8.67	67.4	4.5	8.92	1.5

	Jute			Potato		
Year	Area ('000 acres)	Yield (Bales/ acre)	Produc-tion ('000 Bales)*	Area ('000 acres)	Yield (mds./ acre)	Produc-tion ('000 tons)
1959-60	11.5	2.20	25.7	2.8	116.08	11.9
1960-61	10.5	3.35	35.2	2.3	113.24	9.6
1961-62	16.9	3.30	55.8	2.6	97.22	9.3
1962-63	20.7	4.64	96.0	4.1	110.03	16.6
1963-64	16.1	2.90	46.7	3.9	82.65	11.8
1964-65	14.2	4.61	65.5	4.9	128.51	23.1
1965-66	12.2	1.45	17.7	5.1	116.92	21.9
1966-67	11.6	1.94	22.5	4.5	99.75	16.5

* One bale = 4.85 mds.

	Sugarcane			*Musur*		
Year	Area ('000 acres)	Yield (mds./ acre)	Produc-tion ('000 tons)	Area ('000 acres)	Yield (mds./ acre)	Produc-tion ('000 tons)
1959-60	0.7	536.45	13.8	1.1	4.08	0.2
1960-61	0.8	386.08	11.4	1.2	3.93	0.2
1961-62	0.9	550.13	18.2	1.3	3.87	0.2
1962-63	0.6	457.93	10.1	1.4	4.69	0.2
1963-64	1.3	492.52	23.5	1.4	9.64	0.5
1964-65	0.8	479.37	14.1	2.1	5.10	0.4
1965-66	0.5	469.19	8.6	0.8	4.50	0.1
1966-67	0.6	504.46	11.1	1·1	4.44	0·2

(contd.)

AREA, YIELD PER ACRE AND PRODUCTION OF PRINCIPAL CROPS IN HOWRAH DISTRICT : 1959-60 TO 1966-67—*contd.*

Year	*Khesāri*			Gram		
	Area ('000 acres)	Yield (mds./ acre)	Production ('000 tons)	Area ('000 acres)	Yield (mds./ acre)	Production ('000 tons)
1959-60	41.2	3.69	5.6	2.0	4.58	0.3
1960-61	50.9	4.87	9.1	0.6	6.78	0.1
1961-62	63.5	4.03	9.4	1.6	2.81	0.2
1962-63	41.6	5.68	8.7	0.9	6.43	0.2
1963-64	32.7	5.12	6.2	1.8	4.19	0.3
1964-65	23.1	4.74	4.0	1.1	6.08	0.2
1965-66	11.7	6.26	2.7	0.2	7.82	0.1
1966-67	12.2	3.27	1.5	1.0	5.36	0.2

PROGRESS OF SCIENTIFIC AGRICULTURE

Agricultural implements

Primitive agricultural implements like the plough, the spade and the sickle are still very much in use in the district. Scientific farming has not yet spread beyond localized pockets. Ignorance and poverty of the peasants as also the lack of an extensive educative organization stand in the way of modern agricultural expansion. In 1951 the number of wooden and iron ploughs in the district was 40,659 and 28 respectively. In 1956 the corresponding numbers were 45,819 and 165.[1] There was no tractor in the district prior to 1961. During the Third Plan period, improved implements like the mould board plough, wheel hoe, seed drill, paddy weeder, seed dresser etc. were stored in the different Block offices of the district for supply to cultivators. Demonstrations were also held on farmers' holdings so that the villagers could appreciate the performance and advantages of these implements. The cultivators are generally reluctant to use improved ploughs as they feel that their cattle are too weak to draw these heavy appliances. Thus the deplorable condition of local cattle is yet another cause for the backwardness of Indian agriculture The demand for other types of improved implements, however, is on the increase though to a limited extent. At present a fitter mechanic is attached to each Development Block for repairing the improved agricultural implements in use within the Block area As the small individual holdings are too small for the use of tractors, they are mostly employed on Government farms.

Improved seeds

According to some agricultural experts, improved seeds can increase the yield by at least 10 per cent. During the Third Plan a scheme was launched for multiplying better quality seeds. The breeder seed of paddy produced under the supervision of the Economic Botanist (III) of the State Agriculture Department is multiplied in a few selected farms to produce the nucleus seed which is then multiplied in the Block seed farms and the foundation seeds thus produced are

[1] Source : Statistical Abstract, West Bengal, 1961.

supplied to the registered growers of the district for further proliferation. The seeds so produced are purchased by Government for distribution among other cultivators in the following year. A scheme for construction of three seed stores per Block, each with a capacity of 1,000 maunds, was taken up during the Third Plan period. Up to 31.12.65 only one such seed store was set up in the district at Uluberia.

Block seed farms

In 1966-67 there were 6 Block seed farms in the district for multiplication of foundation seeds. They were located in Uluberia, Uday Narayanpur, Syampur II, Bagnan I, Amta I and Jagatballavpur Development Blocks. The following statement would give an idea of the working of these farms from 1963 to 1966.

PERFORMANCE OF BLOCK SEED FARMS IN HOWRAH DISTRICT: 1963-64 TO 1965-66

Profit & Loss in Rupees (including establishment costs)

Name of the Block Seed Farm	Area (in acres)	1963-64		1964-65		1965-66		Crops generally multiplied
		Profit	Loss	Profit	Loss	Profit	Loss	
Uluberia I	24.1	—	2,387	—	883	78	—	Paddy—Patnai S.R.—26B, *Kumrāgore*, *Raghusāl*, *Tilak-kāchāri*
Uday Narayanpur	21.7	—	6,668	—	2,843	—	145	*Āus*, *Āman*, Jute
Syampur II	26.0	—	0.7	—	—	—	2,878	*Āman*
Bagnan I	24.4	—	2,387	—	3,913	6,610	—	*Āman*, Wheat, Mustard, *Khesāri*
Amta I	21.3	—	—	—	—	2,015	—	Jute, *Āman*, *Dhainchā*, Spinach
Jagatballavpur	24.1	—	—	—	—	—	—	—

The District Agricultural Office also supplies various kinds of seeds to cultivators under the Seed Saturation Scheme. The following table gives the quantities so distributed in the district during the years 1963-64 to 1965-66 [1]

SEEDS DISTRIBUTED IN HOWRAH DISTRICT UNDER SEED SATURATION SCHEME

Kind of seed	1963-64	1964-65	1965-66
Paddy	26,820 Kg	24,536 Kg	17,723 Kg
Jute	429 ,,	500 ,,	820 ,,
Wheat	750 ,,	1,000 ,,	6,745 ,,
Pulses	100 ,,	278 ,,	225 ,,
Sugarcane	50,382 ,,	52,248 ,,	37,320 ,,
Potato	14,020 ,,	33,730 ,,	63,200 ,,
Mustard	465 ,,	1,212 ,,	2,100 ,,

[1] Source: District Agricultural Officer, Howrah.

Rotation of crops

Rotation of crops is beneficial to the soil. It also helps control the growth of weeds and protects crops from the attack of certain pests and diseases. Application of chemical fertilizers is found to be most effective in lands where rotation of crops is practised. It also increases the humus content of the soil. In our country where farm-yard manure is not available in sufficient quantities, rotation of crops is a very feasible method for retaining the fertility of the soil.

The principal crops of the *kharif* season extending from mid-April to October are paddy and jute. Correspondingly, the main crops of the *rabi* season extending from August to December-January are potato and winter vegetables and the less important ones are wheat, pulses and mustard seed. In 1961, 14.23 per cent of the total cultivated area of the district, lying mostly within the Syampur thana, was under double cropping. The olitorious variety of jute followed by *āman* paddy and potato are raised from the same land in certain parts of the district. Elsewhere, the crops rotated are jute or early *āus*, *āman* and pulses, onions and *uchchhe*. Normally, jute or autumn rice is rotated with pulses of superior varieties like *mug*, *maṭar* and *musuri* while *āman* paddy is rotated with *khesāri* and sugarcane with jute and pulses.

Local manurial resources

During the Third Plan there was a scheme for granting 50 per cent subsidy for construction of pucca manure pits and brick-on-edge floors of cattle-sheds for better conservation of manure and best utilization of cattle urine in rural areas. The extent to which the district benefited from this scheme will be evident from a later table. Researches show that cattle-shed manure is almost ten times as effective as other manures and fertilizers put together. To get optimum results, the farm-yard manure should be stored in well-protected pits. Compost may also be prepared from the combined decomposition of dung-waste, night soil, litter, straw and other household waste like sweepings, wood ash, leaves etc. These may be preserved in trenches and when the height of these materials reaches one or two feet above the ground level, they are plastered with a paste made of cattle dung and earth. By this process nitrogen and moisture, required for decomposition, are conserved. Within six months the manure is ready for use and with its application the yield of crops increases from 25% to 50% in most cases.

Year	No. of 'farm leaders' trained	No. of pucca pits constructed	No. of cattle-sheds constructed	Quantity of compost produced
1963-64	166	599	120	18,242 tons
1964-65	106	815	364	40,797 ,,
1965-66	25	304	85	30,440 ,,

During the Third Plan, a scheme was taken up for training 'farm leaders' in improved and scientific methods of compost production. The preceding table shows the number of 'farm leaders' trained, the number of pucca pits and cattle-sheds constructed and the quantity of compost produced in the district between 1963-64 and 1965-66.

Green manuring

It is well-known that green manuring is one of the cheapest methods of improving soil fertility. For this purpose, in 1964-65 about 400 quintals of *dhainchā* seeds were distributed in the district at 50 per cent subsidy and the total area manured was 2,000 acres. In 1965-66 the corresponding figures were 254.36 quintals and 1,300 acres.[1]

Town compost scheme

Compost prepared from town refuse and night-soil is very rich in nutrient content and is a soil conditioner too. It benefits all crops, especially paddy and vegetables. Such compost consumed in the district was 747 tons in 1963-64, 776 tons in 1964-65 and only 20 tons in 1965-66.[2] Town compost is distributed to cultivators and different Government farms by the municipalities at a nominal cost fixed by the local bodies. The scheme is in operation in Howrah district since 1947 in close collaboration with the Government of India which grants a subsidy of 12 rupees for every 5 rupees spent by the State Government.

Calcutta sludge distribution scheme

The purpose of the Calcutta sludge distribution scheme is to utilize the solid portion of the underground sewage after treatment at the sewage treatment plants of the Calcutta Corporation at Bantala. This manure benefits all crops, the normal dose being 3 metric tons per acre. In 1963-64, 52.75 metric tons of this sludge was supplied to Howrah district, the corresponding quantities supplied in 1964-65 and 1965-66 being 124.5 and 229.5 metric tons respectively. The manure is distributed to cultivators at a subsidised rate of Rs. 10 per metric ton. The scheme has been in operation in the district since 1948-49, the overall costs being borne by the State and the Central Governments in the ratio of 87½% to 12½%.

Chemical fertilizers

Farm-yard manure, mud from tanks, green manure etc. have been and still are the traditional fertilizers largely in use in the district. Chemical fertilizers made their appearance in sizable quantities only during the Third Plan period and ammonium sulphate, urea, superphosphate and fertilizer mixtures are now the more popular varieties. During 1965-66, 4,949 tons of chemical fertilizers were sold to farmers in the district through 331 depots of private traders besides 765 tons retailed by the co-operative societies. The following table gives the consumption figures for different kinds of fertilizers between 1963 and 1966.[3]

[1] Source: District Agricultural Officer, Howrah.
[2] Source: Deputy Director of Agriculture (Manure), West Bengal.
[3] Source: District Agricultural Officer, Howrah.

CONSUMPTION OF CHEMICAL FERTILIZERS IN HOWRAH DISTRICT: 1963-66
(figures in tons)

	1963-64	1964-65	1965-66 *
Ammonium Sulphate	502.9	368.9	637.4
Urea	21.2	227.1	245.1
Superphosphate	13.4	20.2	32.2
Fertilizer mixture	712.8	1,541.5	2,858.3

The upward trend in consumption is clearly discernible from the above statistics. In spite of this, the common feeling in agricultural circles of the district is that a large part of the demand still remains unsatisfied due to paucity of supplies.

Agricultural diseases and pests

Agricultural diseases and pests still cause great loss to crops. The more important of them affecting *āus*, *āman* and *boro* paddy as also jute, sugarcane, vegetables, betel-leaves and fruit orchards are briefly described below.

Paddy pests and diseases

Among insect pests of paddy mention may be made of rice hispa, swarming caterpillar and rice stem borer. Rice hispa is a very small black beetle with spines all over the body which attacks the seedlings as also grown-up plants of *āus*, *āman* and *boro* by feeding on the epidermis of the leaves. This is the most common pest in Howrah district. The swarming caterpillar is of greyish yellow colour with reddish or yellowish stripes across its body. It feeds on the leaves of young paddy plants. Occasionally it visits the fields in swarms and destroys the crops by eating up the leaves. The rice stem borer is a white caterpillar which bores into the paddy stem causing its death. Leaf spot, a fungus disease affecting paddy, causes great damage to the rice crop of the district. It retards the growth of the plants and the formation of grains.

Paddy pests can be combated by dusting the affected areas with B.H.C. 10% at 15 lbs. per acre. Before transplantation the seedlings should be dipped in solutions containing folidol or endrin and until the flowering stage the cropped area should be dusted with 5% D.D.T. or B.H.C. 5%.

Jute pests

The most common jute pest in the district is a green semilooping caterpillar which devours the top leaves of the plants and thus retards their growth. The hairy caterpillar is another bad pest. Minute creatures called jute mite and invisible to the naked eye also attack the under-surface of jute leaves causing them to curl. Among other diseases, the stem rot attacks the stems and leaves of jute plants blackening and destroying them.

Disease of sugarcane

Red rot is a fungus which rows inside canes causing them to wither while red cavities appear in the pith and no juice is found. The insect pests of sugarcane include the moth borer, white moth borer and white ant termites. The former is a dirty white coloured caterpillar which

riddles fairly grown up canes. White moth borer is a big milky white caterpillar which bores into the top of the canes. White ant termites are injurious to young canes.

Diseases of vegetables

Among diseases affecting the potato crop, the most damaging is the potato blight which causes small brownish blotches to appear on the leaves. If the weather is damp, especially foggy, the disease spreads quickly and destroys the whole crop. There is a fungus disease which attacks the betel vines mostly during the rainy season. Water-logged soil and defective drainage help its rapid growth.

Coconut pests

The rhinoceros beetle attacks the young leaves of coconut in consequence of which the tree may die. Its control consists in the removal of the beetle while the holes made by it are to be filled up with sand mixed with 590 B.H.C. dust.

State assistance to agriculture

Financial assistance to farmers is given by the State Government mainly in the form of agricultural, cattle purchase and fertilizer purchase loans. The amounts so distributed in the district during the first three Plan periods are shown in the following table.[1]

FINANCIAL ASSISTANCE TO FARMERS IN HOWRAH DISTRICT DURING THE FIRST THREE PLAN PERIODS

Period	Agricultural loan (Rs.)	Cattle purchase loan (Rs.)	Fertilizer purchase loan (Rs.)
First Plan	8,000	22,600	Nil
Second Plan	8,60,000	1,83,070	1,69,706
Third Plan	9,24,372	3,59,975	2,23,229

These loans were advanced by the District Magistrate out of the funds allotted to him by the Government while loans for irrigation, reclamation of land and productive schemes were advanced by the Block Development Officers out of the funds provided in the budgets of the Development Blocks. The statement below shows the expenditure incurred by the Block Development Officers in connexion with agriculture and irrigation in the district during the year 1965-66.

Name of Block	Expenditure under various agricultural schemes (Rs.)	Expenditure under irrigation schemes (Rs.)
Baly-Jagachha	12,590	6,000
Sankrail	17,232	Nil
Panchla	19,001	Nil
Jagatballavpur	63,292	40,000
Domjur	46,070	9,115
Syampur I	47,240	5,550

(contd.)

[1] Source: District Magistrate, Howrah.

Name of Block	Expenditure under various agricultural schemes (Rs.)	Expenditure under irrigation schemes (Rs.)
Syampur II	63,240	6,150
Bagnan I	11,006	4,550
Bagnan II	3,690	Nil
Amta I	63,292	Nil
Amta II	16,311	85,000
Uluberia I	34,368	47,457
Uluberia II	26,434	Nil
Uday Narayanpur	23,127	5,750

Role of co-operatives

Re-organized during the Third Plan period, 32 agricultural service co-operatives were functioning in various Development Blocks of the district in 1966-67 as shown in the statement below.[1]

AGRICULTURAL SERVICE CO-OPERATIVES IN HOWRAH DISTRICT : 1966-67

Name of Block	No. of Service Co-operatives
Syampur I	16
Syampur II	4
Amta I	2
Amta II	2
Bagnan I	1
Uday Narayanpur	7

There were besides 5 Large-sized Co-operative Marketing Societies in the district for feeding these agricultural service co-operatives. The following table would give an idea of the quantities of agricultural commodities handled by these big marketing societies during 1964-65 and 1965-66.

Name and location of Large Scale Co-operative Society	Value (in Rs.) of agricultural commodities handled during 1964-65	1965-66
Sibpur Co-operative Marketing Society Ltd., Vill.—Sibpur, P.O.—Guzarpur	77,930	82,955
Syampur Block II Large-sized Primary Co-operative Marketing Society Ltd., Vill & P.O.—Sasati	17,300	1,09,205
Jagatballavpur Thana Primary Co-operative Agricultural Society Ltd., Vill. & P.O.—Bargachhia	22,767	1,96,251
Amta Thana Large-sized Primary Agricultural Co-operative Marketing Society Ltd., Vill & P.O.—Amta	14,600	1,49,138
Uday Narayanpur Thana Large-sized Primary Co-operative Marketing Society Ltd., Vill. & P.O.—Uday Narayanpur	43,360	2,06,487

[1] Source: Assistant Registrar of Co-operative Societies, Howrah.

While the total amount of loan received by the service co-operative societies during 1965-66 was Rs. 22,51,920, the corresponding advance received by the large-scale societies during the same year was Rs. 23,59,485. Up to 1965-66, only 10.5% of the agricultural population of the district was covered by the co-operative network leaving nine-tenths of it to be brought under the co-operative fold.

Activities of the Agriculture Department

The following extract from the Final Report on the Survey and Settlement Operations in the District of Howrah during 1934-39 would throw light on the condition of agriculture in the district some 30 years ago: "Agriculture has been left in the hands of the uneducated people, who live in their own world cut off from the rest. Thus there is no attempt to introduce new crops. ... The uneducated cultivator keeps no information of the experiments that are being carried on in the Government Agricultural Farms and there is little possibility of improvement till some educated young men take to agriculture as a profession and serve as models to the farmers."

Since then, especially after Independence, much has been done to improve the agricultural practices. During the First and Second Plan periods the agricultural set-up at the district level was strengthened and more powers were given to the District Agricultural Officer and the Block Development Officers for speedy execution of the various schemes. The Thana Agricultural Farms were reorganized during the Third Plan when more and more agricultural demonstrations were held in Block areas to demonstrate to the cultivators the advantages of modern methods of cultivation and use of improved implements. Depots were also opened in interior villages to supply various kinds of chemical fertilizers to the farmers. Land reclamation loans and loans for miscellaneous agricultural schemes including small irrigation projects were also liberally advanced. Though Howrah has not yet been included in the Intensive Rice Cultivation Scheme, the advantages of scientific paddy cultivation are being systematically exhibited through demonstrations held in cultivators' holding all over the district.

In 1966 a scheme was taken up to increase the cultivation of high-yielding Mexican wheat by utilizing lands where *āman* paddy had been destroyed earlier by drought. Six Block farms at Domjur, Jagatballavpur, Uday Narayanpur, Panchla, Bagnan I and Uluberia I gave the lead by allotting about 100 acres of land each for large-scale cultivaiton of this wheat and using about 35 quintals of seeds for the purpose. Serious attempt was also made to grow a second crop from the fields where *Kartiksāl* and other early varieties of *āman* paddy had been grown. In many areas the peasants were encouraged to grow pulses after harvesting the *āman* paddy and in 1966 about 1,000 maunds of seed pulses were distributed for this purpose at a 50% subsidy. Potato cultivation was also encouraged, especially in the areas bordering the Hooghly district, which is well known for its

potato crop, and about 600 quintals of improved seed potatoes were distributed in 1966 in the Block areas of Uday Narayanpur, Jagatballavpur, Amta, Domjur and Panchla. The results of experimental cultivation of sweet potato in the Amta Block farm was also a success —an acre yielding about 100 maunds on an average. Seedlings of cabbages, cauliflowers, chillies and tomatoes are now regularly raised in the different Block farms as also in the Sibpur Botanic Gardens for distribution to growers, free of cost. Silting up of the Damodar river has, paradoxically, increased the agricultural land in the district by several hundred acres; except during the rains, most of the river bed is now under cultivation.

ANIMAL HUSBANDRY AND FISHERIES

Pasturage & fodder crops

There is little pasturage in the district. There was a time when every village had its own grazing grounds. But with the tremendous increase in population, the consequent pressure on land has made such *gochar* lands a thing of the past. The only pasturage available at present is the narrow strips of road-side slopes where the cattle are usually left tied. The cattle get some grazing off the fields after harvesting but are kept out of them as soon as crops are sown. Consequently, they have to subsist on straw or such other stale fodder for the best part of the year.

During the Second Plan period the Animal Husbandry Department took up two schemes for development of fodder cultivation and ensilaging in the district and distributed about 187½ maunds of seeds and cuttings and constructed 17 pits for ensilaging green fodder crop. During the Third Plan period subsidized distribution of 18 quintals and 83 kilograms of seeds and cuttings and construction of 14 silo pits were also arranged. Under another scheme, demonstrations of cultivation of fodder crops were taken up on selected farmers' lands.

Livestock

The Livestock Census of 1961 gave the following figures for cattle, buffaloes, sheep, goats, horses and ponies, pigs, fowls and ducks in the district.[1]

LIVESTOCK IN HOWRAH DISTRICT ACCORDING TO THE 1961 CENSUS

	Cattle				Buffaloes			
	Total	Cows	Bulls & bullocks	Young stock	Total	Cows	Bulls & bullocks	Young stock
Rural	2,05,444	1,16,232	1,278	87,934	957	547	7	403
Urban	5,542	3,759	23	1,760	3,796	3,031	32	733
Total	2,10,986	1,19,991	1,301	89,694	4,753	3,578	39	1,136

	Sheep	Goats	Horses and Ponies	Pigs	Fowls	Ducks
Rural	2,282	1,21,973	152	237	1,85,595	1,23,872
Urban	402	4,756	35	89	5,846	2,982
Total	2,684	1,26,729	187	326	1,91,441	1,26,854

[1] Source: Superintendent of Livestock Census, West Bengal.

The breeds of cattle are of the usual nondescript type and a pair of bullocks can plough no more than 4 to 5 acres of land during the year. Their life span is from 8 to 10 years and average working life 5 to 6 years. Cows are kept by householders and milkmen, the latter also keeping buffaloes. Sheep and goats are usually reared by Muslims and low caste Hindus. Kaoras and Haris, who are low caste Hindus, keep pigs while horses and ponies, rather a rarity these days, are prized by more wealthy Hindus and Muslims.

Measures to improve quality of breeds

Before Independence, stud bulls were occasionally distributed in rural areas of the district for improving the breeds of cattle but their number was very inadequate. In 1937-38 there were only 27 of them in the whole of the district. Consequently, ordinary scrub bulls had to be pressed into service in large numbers resulting in the deterioration of the stock day by day. After Independence, emphasis began to be laid on schemes for the improvement of cattle. During the pre-Plan period, there was only one first class State veterinary hospital in the district manned by a Veterinary Inspector, a Compounder, two *Gowālās* and two trained Veterinary Field Assistants. During this period there were only 4 Itinerant Veterinary Assistant Surgeons, one each for Howrah, Amta, Uluberia and Domjur police stations for attending to all types of work connected with the treatment and prevention of livestock diseases within their respective jurisdictions. The District Board maintained only one veterinary hospital at Uluberia and the services of the Veterinary Assistant Surgeon were placed at their disposal to carry on various animal husbandry activities. In December 1965 this hospital was closed down and a new charitable veterinary dispensary, known as the Rameswar Maliah Veterinary Dispensary, was started at 429 Grand Trunk Road (North), Howrah. It is managed by a local committee, and a Veterinary Inspector is in charge of the hospital. It may be added that until recently, the District Veterinary Assistant Surgeon of Hooghly was also in charge of veterinary matters in the Howrah district.

During the First Five Year Plan no extension work was done in the district and the working of the Veterinary Directorate continued as before. During the Second Plan period a District Veterinary Officer was posted for the first time exclusively for the district. It was during this period that 7 dispensary-cum-peripatetic centres were opened in the different Development Blocks of the district and an equal number of veterinary aid centres were started in the interior villages. Two artificial insemination centres were also established in the district for improving the breeds of cattle. During the Third Plan period another aid centre was opened and care was taken to equip every institution with a modern pathological wing for controlling epidemic diseases and for better treatment of livestock. Mass protection of livestock was also systematically encouraged through vaccination campaigns. The particulars of the work done at different

veterinary centres of the district between 1963 and 1966 are summarized in the following table.[1]

NUMBER OF MASS VACCINATIONS

Year	Rinderpest	Ranikhet Disease
1963-64	1,00,007	1,36,723
1964-65	55,316	1,80,305
1965-66	35,260	2,00,850

NUMBER OF LIVESTOCK TREATED

Year	Cattle	Birds
1963-64	20,991	8,127
1964-65	23,627	9,962
1965-66	21,297	8,527

NUMBER OF ARTIFICIAL INSEMINATIONS

Year	Cattle
1963-64	1,874
1964-65	2,307
1965-66	1,023

Cattle diseases

The chief cattle diseases in the district are black quarter, rinderpest and those affecting the feet and mouths of the animals. These are contagious and the sick cattle have to be segregated immediately. The Veterinary Assistant Surgeon attached to the Block dispensary attends to these cases and when an epidemic is threatened he goes round the villages with his staff and adopts preventive measures. The Ranikhet disease, if not checked in time, may be ruinous to poultry.

Livestock market

There is only one livestock market in the district, mainly for cattle, located at Uluberia. In 1961 some 20,000 cows, bulls, bullocks and young stock and about 7,000 buffaloes were sold through this mart. Nearly half of them were of local origin and the rest were imported from various markets of Midnapur and 24-Parganas. The imported animals are usually offered for sale by itinerant *bepāris* while the local ones by the owners themselves. Poultry and poultry products are of little commercial importance in the district. An estimate reveals that in 1961 approximately 2,05,823 birds and 1,60,81,640 eggs were offered for sale in the different markets of the district.

Supply of milk

In the rural areas many families keep their own cows. The milk supply scheme operating in the cities of Calcutta and Howrah for

[1] Source: District Veterinary Officer, Howrah.

several years now draws its supplies mainly from the State dairy farm at Haringhata but also depends on supplementary quantities collected from the interior of Howrah and Hooghly districts where a few chilling plants have been set up at suitable points which, however, tap only the available surpluses without leading to an expansion of dairy farming in those areas. In Howrah city the consumers get their supply of milk from the Central Dairy at Calcutta distributed through the numerous milk depots spread over the city. As supply of milk within the Howrah urban area comes from the Central Dairy at Calcutta, no milk supply scheme has been taken up separately for the district. A proposal for construction of a big modern cold storage in Howrah town for storing processed milk to facilitate distribution is, however, under consideration of the State Government.

Fisheries

The varieties of fish and the places in the district where they are found have been described in Chapter I.

Fishing equipments

In the rivers, especially the Bhagirathi, fish are caught with nets worked from *dingis* (boats), 25 feet by 4 feet in size and manned by 2 to 5 men which can hold 10 to 15 maunds of fish. Lower down, near Uluberia, bigger boats are used, with a capacity of 100 to 500 maunds. Drag nets (*berā jāl*). running to 150 feet or more in length, are commonly in use. They are provided with floats and weights and are dragged close to the banks. During the rains, fishermen substitute a labyrinth net, locally called *kona jāl*, i.e. a drift net with an extensive purse and two net side-walls, to one of which is attached a guiding net. The purse and side-walls are kept in position by bamboo poles. For catching *Hilsā*, gill nets are used, and purse nets (*suti jāl*) are used where the current is strong. The latter is shaped like a long funnel the narrow end of which is secured by a string. The net is kept stretched by the current and from time to time the fisherman comes round in his boat and clears out, through the narrow end, all the fish imprisoned in it. Cast nets, commonly known as *kheplā jāl*, are used from the banks or from dug-outs in the shallow water of creeks and branch channels. The cast net is either of cotton or of hemp with small meshes, and has iron weights at the end. It is whirled over the head and then cast when it falls to the bottom in a circle. In the rice fields and in sluggish channels a *ghuni*, which is a split bamboo trap with a double screen, is preferred. In flowing streams dammed from bank to bank, a *tatur jāl*, i.e. an enclosure of net or split bamboo. is placed in a passage left open in midstream. A screen or guide from this enclosure floats downstream and is kept in position by the current and by floats and weights. Fish in their upward journey creep along the screen to the enclosure, and then try to jump over it, and are thus caught in the nets spread behind its top. In muddy sloughs the *kôi* fish is caught in the meshes of gill nets or by baited hooks. In tanks and ponds larger fish are usually trapped by cast nets, and smaller fish by bamboo *ghunis* set up near the bank in shallow waters.

Fish is generally brought dead to the market, except such fish as *kôi* or *māgur* which can live for a long time on a little water. There is no arrangement in the district for cold-storing of fish but ice is used for preserving them for short period.

During the first three Plan periods, various schemes for developing fisheries in the district were taken up of which mention may be made of the Unionwise Tank Development Loan Scheme, Thanawise Demonstration Fish Farm Scheme, Fish-pond Manure Scheme, Medium-term Loan Scheme and Needy Fishermen's Loan Scheme. The following statement will show the progress of these schemes.[1]

UNIONWISE TANK DEVELOPMENT LOAN SCHEME

Period	Amount sanctioned (Rs.)	Water area covered (in acres)
First Plan	6.660	41.46
Second Plan	6,895	45.55
Third Plan	1,535	7.98

THANAWISE DEMONSTRATION FISH FARM SCHEME

Period	Amount sanctioned (Rs)	Water area covered (in acres)
First Plan	2,950	17.1
Second Plan	3,220	7.6
Third Plan	1,500	6.3

FISH-POND MANURE SCHEME

Period	Amount of subsidy paid (Rs.)	No. of fishermen benefited
First Plan	Nil	Nil
Second Plan	4,100	33
Third Plan	9,468	89

MEDIUM-TERM LOAN SCHEME

Period	Expenditure incurred (Rs.)	No. of Tanks improved	Water area covered (in acres)	No. fishermen benefited
First Plan	56,511	419	144.55	223
Second Plan	17,107	139	30.38	101
Third Plan	25,922	129	32.00	95

[1] Source: District Fishery Officer, Howrah.

NEEDY FISHERMEN'S LOAN SCHEME

Period	Expenditure incurred (Rs.)	Number of fishermen benefited
First Plan	1,347	231
Second Plan	9,790	58
Third Plan	12,180	69

During 1966-67, Rs. 1,96,000 was sanctioned for development of fish farms in the district through private agencies while Rs. 1,200 was earmarked under the Needy Fishermen's Loan Scheme.[1]

Fishermen's Co-operative Societies

There were 22 Fishermen's Co-operative Societies in the district in 1965-66 of which as many as 14 were registered between 1963 and 1964. They operated mostly in the rural areas. During 1965-66, a sum of Rs. 6,11,950 was sanctioned to 16 of them of which the largest share of Rs. 1,40,000 went to the Howrah District Central Fishermen's Co-operative Society. The Assistant Registrar of Co-operative Societies, Howrah looks after the working of these co-operatives and helps and guides them in organizational matters. Due to non-availability of water areas on suitable terms, these societies could not make much headway in pisciculture during recent years. But once this initial difficulty is overcome, it may be possible to run them on business lines. The loan assistance received by Fishermen's Co-operative Societies in the district during 1965-66 is given in the following table.[2]

Name of Fishermen's Co-operative Society	Address	Amount of loan sanctioned (Rs.)
1. Howrah District Central F.C.S. Ltd.	Panchanantala, Howrah	1,40,000
2. Barberia F.C.S. Ltd.	Vill.—Barberia P.O.—Somruk	33,200
3. Bagnan Union F.C.S. Ltd.	Vill.—Gopalpur P.O.—Bagnan	29,000
4. Fuleswar F.C S. Ltd.	Vill. & P.O.—Phuleswar	34,000
5. Kashmali Anchal F.C.S. Ltd.	Vill. & P.O.—Kashmali	33,150
6. Kalinagar F.C.S. Ltd.	Vill.—Kalinagar P.O.—Jagadishpur	34,000
7. Bhagirathi F.C.S. Ltd.	Vill.—Hiraganj; P.O.—Dakshin Ramchandrapur	34,000
8. Chaltakhali F.C.S. Ltd.	Vill.—Chaltakhali P.O.—Harishpur	28,100
9. Deygram Mankur F.C.S Ltd.	Vill. & P.O.—Mankur	29,000

[1] Source: As before.
[2] Source: Assistant Registrar of Co-operative Societies, Howrah.

	Name of Fishermen's Co-operative Society	Address	Amount of loan sanctioned (Rs.)
10.	Jayanti Betai & Nowpara F.C.S. Ltd.	Vill. & P.O.—Khariop	33,100
11.	Bania F.C.S. Ltd	Vill.—Bania P.O.—Dihi Mandalghat	29,100
12.	Anantapur Jhumjhumi F.C.S. Ltd.	Vill.—Jhumjhumi P.O.—Anantapur	29,100
13.	Radhapur-Baneswarpur Anchal F.C.S. Ltd.	Vill. & P.O.—Jallabad	29,100
14.	Nabagram Anchal F.C.S. Ltd.	Vill. & P.O.—Gobardaha	34,100
15.	Saiberia F.C.S. Ltd.	Vill. & P.O.—Saiberia	29,100
16.	Bainan Sabsit F.C.S. Ltd.	Vill. & P.O.—Kalyanpur	34,000

FLOODS, FAMINES & DROUGHTS

Floods

When Hooghly and Howrah constituted a single district in the past, the Howrah portion of it experienced floods more frequently. In October 1823 the banks of the Damodar gave way and the situation was officially described as follows: "Howrah and Sulkeah and all the adjacent country is completely under water. On the main road at Howrah there stand two and three feet of water, and all the space between that and the other side of the Benaras Road is one expanse of water."[1] In May 1833, a cyclone followed by floods caused extensive damage. The Rupnarayan and the Damodar were in spate and rose to eight feet above ordinary spring tide levels. Most of the embankment were swept away and the greater part of the district was covered with saline water. In August 1844, a serious flood occurred again when the Damodar burst its banks in 170 places and submerged the whole area between Baly and Dhaniakhali (now in Hooghly district). In September of the following year, there was another flood which, however, caused much less damage.

Floods of 1885

One of the most disastrous floods of the last century visited the district in August 1885 when due to an exceptionally heavy rainfall the rivers were in spate. Embankments were breached at Mellak (P. S. Bagnan) on the left bank of the Rupnarayan and at Thalia (P. S. Amta) on the right bank of the Damodar. The flood rushed through these breaches inundating the country to a depth of 10 feet. The whole of the tract, measuring about 353 sq. miles, lying between the Damodar and the Rupnarayan from the Uluberia Canal northwards and eastwards as far as the Saraswati river was submerged. No lives were, however, lost as the villages were usually above flood-level. "The destruction of houses was, however, very great, over 10,000 falling or being rendered uninhabitable. The damage done to the standing crops was still more disastrous, the rice on 2,94,000 *bighas* being destroyed, besides sugarcane (5,900), jute (8,900),

[1] Selections from the Calcutta Gazette. Vol. V. pp. 558-9.

vegetables (7,450) and betel or *pan* (1,224 *bighās*). Young fruit trees were also much injured, and another important item of damage was the loss of fish, which escaped from the tanks."[1] The total damage caused by the flood was estimated to be 30 lakhs of rupees. It was not found necessary, however, to start relief works or to recommend remission of land revenue.

Floods of 1900

In 1900 there was a heavy and continuous downpour from the 19th to the 24th of September, the recorded rainfall being 24.18 inches at Howrah in 48 hours (20th and 21st September). All the lowlying areas were under water and a large number of cattle was drowned and hundreds of houses destroyed. It was reported that the crop standing on an area of about 150 square miles was totally destroyed. No place, however, was notified as a distressed area and no Government assistance on any extensive scale was considered necessary. In this connexion the District Gazetteer of 1909 reported: "These floods caused much inconvenience and discomfort in Howrah city On the 20th September the water stood 3 feet above the Grand Trunk Road and the neighbouring streets in the (Howrah) city, the gasworks were badly flooded, and no gas could be supplied for upwards of three weeks."[2]

Floods of 1904 & 1905

The district was again affected by floods in 1904 and 1905. In 1904 the Bhagirathi was in spate and breached the right bank embankment south of Uluberia. Forty-one villages in Uluberia police station were affected with 8,000 acres under rice which was practically all destroyed. "The damage to house property, however, was insignificant, no lives were lost, nor were any cattle drowned. Seven villages north of the canal in the Bauria outpost also suffered, but the damage was less than in the south of the thana and the crops were only partially destroyed."[3] In 1905 a considerable area was submerged owing to heavy rainfall towards the end of July. The fall on the 27th and 28th in the Rajapur basin was 17.47 inches and water also poured in from the Amta basin on the west as well as from the Madaria and upland basins on the north causing extensive damage to standing crops. The Bhagirathi was also in flood which breached the zemindary embankment on the right bank and seriously damaged the crops beyond Uluberia.

Floods of 1913-14

In 1913-14 the Damodar, the Dwarakeswar, the Silabati, the Rupnarayan and some of their tributaries were in spate inundating a large tract in Howrah district bordering the lower reaches of the Damodar and Rupnarayan. Local relief was immediately organized by the Government supplemented by voluntary agencies. Considering the suddenness and intensity of the catastrophe, the death-roll was not heavy: nor did the destruction of crops tell so heavily on the people as the loss of their cattle and huts.

[1] L. S. S. O'Malley and M. Chakravarty —op. cit. p. 87.
[2] loc. cit.
[3] ibid. p. 88.

Floods of 1917-18

In 1917-18, the Damodar overflowed its banks and caused some damage in the riparian tracts. A sum of Rs. 1,20,328 was advanced under the Agriculturists' and Land Improvement Loan Acts, most of which was given to the flood-affected people.

Other minor floods

According to the Howrah District Census Handbook of 1953, minor floods were also recorded in the district in 1922, 1926, 1933, 1937, 1939, 1941 and 1950.

Floods of 1956 & 1959

The two Damodar floods affecting the district, the first in 1956 and the second in 1959, caused great damage. During both these years the continuous rainfall in the catchment areas of the Damodar and its tributaries was so heavy that the D.V.C. dams could not hold back all the water which had to be released causing breaches in the Damodar embankments. On both these occasions, standing paddy in many areas was submerged and numerous houses, bridges and roads damaged.

Famine of 1866

Since the great Bengal famine of 1770,[1] no famine, except possibly one in 1788, visited the district until 1866. In the latter year there was widespread scarcity in Orissa which was also felt in Howrah district but to a lesser extent. Relief measures were adopted and in July, a private gentleman, Mr. Sykes, organized a special fund for Uluberia and established free kitchens there which were subsequently taken over by the Government. A pauper camp was opened at the Howrah railway station and a relief centre at Narit in Uluberia subdivision. Cooked food was distributed free at Howrah and Uluberia. Pauper hospitals were also set up at Howrah, Uluberia and Narit for attending to the indigent sick. The death-rate was found to be higher among women and children than men.

Famine of 1943

There was no famine in the district over the long period from 1867 to 1942. But in the following year it was enveloped by the great Bengal famine of 1943. The *āman* crop of 1942, although good, merely helped to wipe off the deficit of the previous year permitting no accumulation of stocks for the next when the harvest failed miserably. The cyclone which hit the coastal areas of the surplus district of Midnapur and 24-Parganas with a high tidal wave on the 16th October 1942 also considerably added to the difficulties landing Bengal in a food crisis of the first magnitude. Had the Second World War not intervened, "Bengal might still have escaped the tragedy. But Burma had fallen in April 1942 and the foreign source of rice to Bengal had thus been cut off. Fighting had moved to the very door of India and Calcutta had experienced five air raids from 20 to 28 December 1942."[2] Natural shortage of supplies, a dislocation of

[1] "A severe famine, however, visited Bengal in 1770 A.D. and made itself acutely felt in Howrah. The corpses thrown in the river made the fish poisonous, and people were brought to such a pass that they were only too glad to feed on human flesh." C. N. Banerjei—An Account of Howrah, Past and Present, Calcutta, 1872. p. 89.

[2] B. M. Bhatia—Famines in India. Bombay, 1963. pp. 322-3.

normal channels of distribution, and a tendency on the part of the consumers, producers, and traders to hoard foodgrains, combined to send prices spiralling to an unprecedented height and caused widespread starvation among the poor. According to the Famine Enquiry Commission: "The rise in prices, which we hold to be the second basic cause of the famine, was something more than the natural result of the shortage of supply which had occurred. It was the result of the belief of the producers, traders and consumers at the end of 1942 and the beginning of 1943 that an ever increasing rise in prices was inevitable and could not be prevented. This belief had been created, not only by the failure of the *aman* crop but by the entire course of events during 1942."[1] Almost the whole of Bengal, including the district of Howrah, was in the grip of this severe famine which, according to the Famine Enquiry Commission, killed "a million and a half of the poor of Bengal."

Relief

Relief measures were belated and inadequate. The Famine Enquiry Commission was very critical of this aspect of the catastrophe. It observed: "While reports of distress in various districts were received from Commissioners and Collectors from the early months of 1943, the Provincial Government did not call for a report on the situation in the districts until June, and detailed instructions relating to relief were not issued till August. Famine was not declared. ...The measures initiated in August were inadequate and failed to prevent further distress, mainly because of the disastrous supply position which had been allowed to develop. A Famine Relief Commissioner was not appointed till late in September. ...The medical relief provided during 1943 was also inadequate. Some of the mortality which occurred could have been prevented by more efficient medical and public health measures."

When the stories of numerous starvation deaths in Bengal reached other part of India the rate of despatches of foodgrains was considerably stepped up. "By the end of the year, 2,94,000 tons of rice had been received in Bengal. ...Had these quantities of foodgrains been supplied earlier, Bengal might have been spared much of the mortality and unnecessary sufferings. ...It was after the visit to Calcutta of the then newly appointed Viceroy Lord Wavell at the end of October 1943 that the army came to the assistance of the civil authorities in meeting the famine. Several thousand troops arrived in Calcutta between 11 and 27 November. They took upon themselves the work of movement of foodgrains and organizing relief and ultimately brought the famine under control."[2] Though details are lacking, many voluntary organizations also set up relief centres at various places in Howrah district for distribution of food to the needy.

[1] Famine Enquiry Commission Report, p. 80.
[2] B. M. Bhatia—Famines in India: 1850-1945. Bombay, 1963. p. 332.

CHAPTER V

INDUSTRIES

The industries of Howrah district may be broadly classified into two groups—the large-scale industries in which machinery and power are used, and the traditional cottage industries. The former comprises the factory industry employing a large labour force as also the workshop industry working near the homes and under the supervision of master-artisans assisted by a few fellow technicians and apprentices. While the factory industry includes jute mills, cotton mills and the like, the workshop industry consists mainly of the vast number of engineering units in the district which, taken together, employ the largest labour force in the district in varied and assorted jobs. The main characteristics of cottage industries are well known although in a highly industrialized district like Howrah their techniques have changed to some extent over the year. The old Howrah District Gazetteer published in 1909 stated: "The potter makes the villagers' earthenware utensils and the brazier their brass vessels, the carpenter fashions wooden or bamboo posts and rafters for their houses and makes their simple furniture, the weavers turn out coarse cotton cloths and the silversmiths crude silver ornaments while the smith makes or repairs ploughshares, *daos*, sickles and other iron utensils required for agricultural or domestic use. These artisans have little capital and few instruments, and generally works single-handed or with the help of their families." Conditions in the villages have since changed considerably and while this has led to the decline of many of the rural industries, others like cotton weaving, have gained a new lease of life. A brief account of the old-time industries of the district is given below.

Silk industry

There is no silk industry in the district at present although it appears to have thrived here during the 18th and the 19th centuries, when mulberry cultivation and the raising of domesticated silk worms used to be carried on in certain areas. During the palmy days of the East India Company's silk trade (1790 to 1835) and even later up to 1875, the trade was kept up but it gradually declined thereafter. According to a survey[1] made in 1903, some 600 part-time workers engaged in the industry had to depend on agriculture as their main source of income. The mulberry trees were grown chiefly along the Damodar and the Kana Nadi and the rearers and spinners were scattered

[1] N. G. Mukherjee—Silk Fabrics of Bengal. Calcutta, 1903. pp. 4-5.

throughout the police stations of Jagatballavpur and Sankrail and all the thanas of the Uluberia subdivision. The Kaibarttas, Bagdis and poor Muslims formed the bulk of the artisans who sent their silk to feed filatures at Furfura in Hooghly district, Ghatal in Midnapur district and Calcutta.

Handloom weaving

Handloom weaving of cotton fabrics was once an important cottage industry of the district. As early as 1580, Betor, a satellite port of Satgaon, was, according to Cesare Federici, who visited it in that year, a place where merchants sold "cloth of Bombast of diverse sortes."[1] In 1758 the East India Company is said to have encouraged settlements of weavers on the western side of the Bhagirathi so as to meet the demand for cloth for its trade. Towards the end of the 18th century, the local products had earned a fair reputation and sizeable quantities were exported to England. By A.D. 1800, however, heavy duties levied on Indian cotton cloths in England and subsequently the introduction of machine-made piece-goods from Lancashire into the Indian market dealt a fatal blow to the indigenous industry and the weavers gradually took to other callings, chiefly agriculture, while others found employment in the newly started factory industries. This recession continued till the beginning of the present century as is evidenced from contemporary census figures showing that while in 1891 there were 2,261 handloom weavers in the district, their number fell to 1,694 in 1901. At that time the chief centres of cotton weaving in the district were located in the police stations of Domjur, Jagatballavpur, Amta and Bagnan. The village Nabasan in thana Jagatballavpur was specially noted for the fine cloth it produced It was only during the *Swadesi* movement which followed the partition of Bengal in 1905 that the long decline in the trade was halted. By O'Malley's time (1909) the position had considerably improved. "The weavers are now using the Serampore looms, with which a man can finish 2½ to 3 yards per day as against 1½ yard with the ordinary loom. The increased outturn obtained thereby is enabling the weavers to meet the growing demand for country-made cloths more fully, and to make larger profits."[2] During the first decade of the present century, the principal products were dhotis and *chāddars* (with or without coloured borders), saris and *gāmchhās* (napkins), all of somewhat coarse yarn. Finer cloths were also woven in small quantities in Domjur and Nabasan, already mentioned. The Tuesday *hāt* at Ramkrishnapur within Howrah town was the principal export centre while cloths were also taken direct to Calcutta by wholesale dealers.

In the late twenties and the early thirties of the present century, the main handloom weaving centres were located in the northern parts of the district within the police stations of Domjur, Jagatballav-

[1] C. N. Banerjei—op. cit. p. 19.
[2] L. S. S. O'Malley and M. Chakravarty—op. cit. p. 98.

pur, Amta and Bagnan. The villages of Begari, Baniara and Khantora in Domjur, Khalna in Amta, and Khajutti, Kalyanpur and Karia in Bagnan P.S., Andul in Sankrail P.S. and Uluberia excelled in the craft while mosquito curtains were woven in Bagnan and a few other places.

After Independence, considerable attention has been paid to the resuscitation of this cottage industry. Co-operative societies have been formed to render assistance to weavers by providing them with finance and technical guidance. Improved appliances are also being supplied free of cost to the weavers within the co-operative fold. In March 1964, the number of registered handlooms in the co-operative sector in the district was 411 while 2,989 looms were operated outside the co-operative fold. The position had further improved by June 1966 when co-operative looms numbered 771 operated by an equivalent number of weavers. In June 1967 the number of looms was 761 and that of weavers 773 while handloom co-operatives numbered 19 and the total quantity of cloth produced by them during 1966-67 was 40,554 metres. The weavers sell their products themselves in the Howrah *hāṭ* while certain quantities are also purchased by the wholesalers, Government sales emporia, the Small Industries Corporation and the State Co-operative Appex Society. In certain cases, the weavers' co-operatives have their own sales organizations. Powerlooms are the latest appliances adding to the production capacity of cotton weavers. In 1966-67 as many as 160 of them were being run by various co-operative societies in the district.

Pottery industry

Village pottery is an important cottage industry in the district as elsewhere in West Bengal. River silt, common clay and a little sand form the principal raw materials from which the hereditary artisans manufacture images, toys and earthenwares like cooking utensils, tumblers, pitchers, jars, washing vats, well-rings, flower pots and roofing tiles. Mostly during the dry months of the year the rural *kumbhakārs* or potters prepare their products on their primitive wheels and sell them in the local *hāṭs*. Howrah being a district traversed by important silt-bearing rivers, the clayey soil forming the main ingredient is available in plenty. The earth in certain parts of the Sadar subdivision is believed to provide the best type of material and the vessels made from it are preferred as they stand the fire better and last longer and are exported in quantities by boats to big consuming centres like Howrah city and Calcutta. The cooking vessels of Patihal in Jagatballavpur P.S. and the large jars of Sankrail enjoy a local reputation while the toys made at Chandipur (Uluberia P.S.), the masks, brackets, imitations of fruits etc. manufactured at Domjur and Uluberia are well known. Roofing tiles of superior quality are produced at Jhapardaha, Prasastha and Mahiari in Domjur thana.

Besides the potter's wheel, the artisans use simple traditional tools

plied with dexterity acquired over generations. The raw materials are collected either free or from rented lands. The craftsmen mostly sell their products at the local markets or supply them to money-lenders who make advances to them when necessary. According to an official survey undertaken in 1962 in the Uluberia subdivision, it appears that the pottery industry in the district is facing competition at present from aluminium and enamelled articles. Though the poorer sections of the rural population cannot yet afford to purchase these costly commodities and have to depend on the age-old earthen utensils, such machine-made products are nevertheless finding some market even in the remote villages. The Survey also found non-availability of fuels at reasonable prices a special problem facing the industry. According to the Census of 1961, there were 7,882 professional potters in the district of whom 6,557 were males and 1,325 females. The rural-urban distribution of these artisans showed that 3,047 of them worked in the urban and 4,835 in the rural areas

Hookah industry

The villages of Begari, Baniara, Kolara, Domjur, Jhapardaha and Sankharidaha, all in Domjur thana, are noted for the manufacture of hookahs. According to a survey undertaken in 1929-30 about 60 families in these villages were engaged in the industry, the bulk of the products being exported outside through the large mart at Begari. The raw materials needed are coconut shells, available in plenty in this part of the district, wooden stems manufactured by local carpenters and polishing agents obtained from the juice of the *gāb* fruit, the recipe of the concoction being kept a trade secret. Local coconut shells of spherical shape can be turned only into *dubbā* hookahs; for better quality pointed hookahs, shells have to be procured from Cochin, Ceylon and Singapore. An industrious worker can turn out a hundred *dubbās* or sixty pointed hookahs a day. The implements used are a knife or two, pincers used for dehusking the shells, a saw, a hammer and the like

The industry fell on evil days after the Partition when the East Bengal market was lost. Another reason for its decline is the growing popularity of cigarettes even in remote areas. In 1966-67 the total number of hookahs produced by these artisans in a month was about 30,000 pieces valued at Rs. 42,000. No Government help in the form of loan or grant has been received by the industry in recent years.[1]

Chikan industry

Early in this century a number of Muslim women in Domjur and Jagatballavpur police stations used to employ their spare time in *chikan* (derived from the Persian word *chikin*, meaning art embroidery) work on fine muslin cloth and their products were sold at the Howrah *hāt* and the Calcutta Municipal Market. Some 30 or 35 years ago a variant of this craft came to thrive at Munshidanga (Domjur P.S.) after the introduction of the German-made 'Mundlos' machine

[1] Source: District Industrial Officer, Howrah.

(a manually operated embroidery machine) and the industry spread to several neighbouring villages including Bankura in the same thana. In 1966 about 400 families were engaged in this profession on a whole-time or part-time basis using about 100 'Mundlos' machines. The average earning of an artisan was approximately Rs. 6 per day though the work had often to be curtailed to only 4 days a week owing to shortage of demand caused by severe competition from factory products. Some units have received Government assistance in the past but no organized attempt appears to have been made so far to arrest the threatened decline of this fine craft.

Jari industry

Jari work consists of a special kind of embroidery done with gilded threads on saris, veils and blouse-pieces especially prized by Marwari women. The craft is said to have originated at Banaras. In 1966-67 about 150 master artisans with 10 to 25 apprentices working under each, were operating in the villages of Dakshin Kolara, Natibpur (Domjur P.S.); Dhulagari (Sankrail P.S.); Panchla, Uttar Panchla (Panchla P.S.); Deulpur, Jalalsi (Jagatballavpur P.S.) and Tehatta and Baikhali (Uluberia P.S.). They were all Muslims with a keen artistic sense and a flair for embroidery work. The industry is largely under the control of the *mahājans* (entrepreneurs) of Burrabazar (Calcutta) who normally supply the materials including gold and silver *jari* procured from Surat in Saurastra.

The tools used are needles, scissors, fine files, wooden frames etc. Employment is seasonal depending on the festive months and also those in which marriages are permissible. The wage rate varies according to the time taken to cover specified areas with embroidery work as also in terms of the weight of raw materials used. In 1966-67 a master artisan normally charged Rs. 2.50 for one *tolā* of *jari* work out of which he would pay Rs. 2.13 to the worker keeping 37 paise for himself.[1] The average earning of a worker was Rs. 2.50 to Rs. 3 per day during the slack season and Rs. 5 to Rs. 8 per day during the peak period. The corresponding earnings of a master artisan varied from Rs. 5 to Rs. 8 and Rs. 10 to Rs. 20 per day. During the past few years Government assistance to this fine craft was limited to the advance of small loans to a few master artisans with no attempt made to save the ordinary workers from being fleeced by the superior interests.

Manufacture of fishing nets

It has already been stated in Chapter III that the Kaibarttas, who are traditional fishermen, form a sizeable proportion of the Scheduled Castes in the district. In the old Howrah District Gazetteer published in 1909 it was stated: "In a riparian district like Howrah fishing is naturally an important industry. ...The industry gives employment to some 10,000 actual workers, the chief castes engaged being Jaliya Kaibarttas, Tiyars, Bagdis and Pods. Fishing takes place in the three

[1] Source: As before.

rivers, their network of branches and *khals*, in the numerous swamps, tanks and ponds, and towards the end of rains in the flooded rice-fields. ...In the rivers, especially the Hooghly, fish are caught with nets worked from boats. ...The nets commonly used are drag nets (*ber* or *bara jal*), running to 150 feet or more in length. They are provided with floats and weights, and are dragged close to the bank. During the rains the fishermen substitute a labyrinth net (called *kona jal*), i.e., a drift net with a capacious purse and two net side walls, to one of which is attached a guiding net. The purse and side walls are kept in position by bamboo poles. Gill nets are used for catching *hilsa*, and purse nets (*suti jal*) where the current is strong. The latter are shaped like a long funnel, the narrow end of which is secured by a string. The net is kept stretched by the current, and from time to time the fisherman comes round in his boat and clears out, through the narrow end, all the fish imprisoned in it. In the shallower water of creeks and branch channels cast nets (*khepla jal*) are commonly used. ...It is either of cotton or hemp with small meshes and iron weights at the end. It is whirled over the head and then cast, when it falls to the bottom in a circle."[1]

Although no comprehensive investigation has so far been undertaken, it appears in the above context that fishing nets are manufactured in many villages all over the district. A limited survey conducted recently revealed that the fishing net industry was located chiefly in the police stations of Amta and especially Uluberia. The following table indicates the important centres of this industry within the Uluberia thana giving the number of persons engaged in it during the peak and lean periods of the year 1959-60.[2]

Name of the village in Uluberia P.S.	No. of units	Employment	
		Peak period	Lean period
Chandipur	25	69	55
Dhula Simla	15	26	17
Hiraganja	30	112	54
Jagadispur	27	57	31
Kalinagar	21	42	45
Prasadpur	13	38	12
Srikrishnapur	13	32	22
Kamina	72	75	75
Sumda	24	28	28
Bauria	72	82	82

[1] L. S. S. O'Malley and M. Chakravarty—op. cit. p. 100-01.

[2] Source: Industry Directory 1960, Statistical Cell, Directorate of Industries, West Bengal (Lithographed).

Solapith industry

Sola is a pithy-stemmed tropical plant growing wild in swamps which has been traditionally used in Bengal for manufacturing the dress of images or decorating their chambers as also for ceremonial headgear used by brides and bride-grooms on the occasion of marriage. It also provides the raw material for the preparation of *sola topis* which were in very great demand during the Second World War. A small quantity is used for making dolls and toys. The demand for deities' dresses has fallen off lately as most Hindu images are now adorned with other materials. The transitory demand for hats during the last World War has also ended. The industry is, therefore, in a state of decline now as is evident from the fact that in 1966-67 only 8 sola artisan families worked at Domjur and Dakshin Jhapardaha and 2 at Begari, all in Domjur P.S. The raw materials required are sola-pith, various decorative tinsels, pigments, thread and adhesive. The tools used consist of a sharp knife called 'kati', scissors and such other simple instruments. After the skin of the sola stem has been removed, thin leaves of the pith are cut with the knife which are then cut to required sizes with scissors. After the various pieces have been dipped in the required pigments, they are properly pasted with adhesive to form the required articles. No survey of the industry in the district has been made and it is, therefore, difficult to indicate the volume of output.

Hand-made paper industry

Formerly a number of Muslim artisans in Amta and Bagnan police stations were engaged in the manufacture of brown country paper but this trade has died out owing to the competition of cheaper machine-made products.

Bamboo and cane-work

In Howrah city and its suburbs a number of Dom families turn out excellent cane-work which includes baskets, chairs, cradles and fancy articles that find a ready market in Howrah city, Calcutta and other places. Bamboo baskets are also made at Domjur, Patihal, Jagatballavpur, Narna, Makardaha and Begari which satisfy local demands. Mats made of the swampy plants *ulu* and *hoglā* constitute a minor industry at Uluberia.

Brassware

Ordinary domestic utensils of brass and bell-metal are made at Kalyanpur and a few other villages in Bagnan P.S., the output being chiefly locally consumed.

Coir industry

Coconut palms are plentiful in the district particularly in its southern parts and the coir industry has long existed on a household basis in the police stations of Panchla, Sankrail, Uluberia and Bauria. In 1959 it provided part-time employment to about 700 persons, the corresponding number for 1966-67 being 570.

Coconut husks form the basic raw material of the industry and they are mostly obtained from within the district although certain quantities are imported from South India. A recent survey reveals that 59% of the raw materials is obtained by the

various establishments from markets lying within three miles of them.[1]

The bulk of the products consists of *bôlens* (crude ropes) largely used in *pan* shops for igniting cigarettes etc. A small quantity of doormats is also prepared. Many of the workers find employment in the craft only on a part-time basis. With such big consuming centres like the twin cities of Howrah and Calcutta nearby, it is not at all difficult for the industry to prosper if proper assistance was made available to the artisans. For instance, regular supply of husks, a better method of coir extraction and other technical know-how as also advance of necessary capital to the workers would go a long way to resuscitate the industry. An enquiry conducted by the State Statistical Bureau in 1955-56 showed that the number of coconut trees in the districts of Howrah and Midnapur was of the order of 12.62 lakhs from which it follows that the difficulty experienced by the artisans at present in getting supplies of husks might be resolved through organizing co-operative societies of growers. It is only recently that the Government of India has set up a Coir Research Institute near Panchla.

Manufacture of bricks and tiles

The Bhagirathi yields good quality silt which is extensively used in the district for manufacturing bricks and tiles. To collect this raw material openings are made in the bank of the river connecting it with shallow yards attached to the units where the silt is deposited during high tides in the rainy season. The openings are thereafter plugged and as the water rises up the deposited silt is used for brick and tiles manufacture.

The industry is concentrated along the Baly khal and in and around Uluberia and the quality of the products compares favourably with that of the well known Raniganj tiles. After meeting local demands large quantities are exported to Calcutta and Howrah. The industry is also carried on in a number of villages within the police stations of Amta, Jagachha, Panchla, Sankrail and Syampur. While no recent statistics are available, the more important units around Uluberia as also the centres at Balitikuri and Puilya (Jagachha P.S.), Kanpur and Manikara (Amta P.S.), Chak Radha Dasi, Podara, Hatgachha, Manikpur, Ramchandrapur and Sankrail (Sankrail P.S.) had 301 units in 1961-62 employing 6,606 workers in all.

Lock industry

Iron and brass padlocks as also lock components used in safes, boxes and almirahs have long been manufactured on a household basis by the traditional village artisans of Mansinhapur, Bargachhia, Patihal (Jagatballavpur P.S.), Domjur (Domjur P.S.) and Jujarsaha (Panchla P.S.). The tools used are the same as those handled by common blacksmiths. Since 1955 the State Government has been running a Central Lock Factory at Bargachhia. During the three

[1] Coir and Coir Products Industry in Howrah—A Type Study. State Statistical Bureau, West Bengal. Calcutta, 1960.

years from 1961-62 to 1963-64 the factory produced padlocks and lock components worth Rs. 5,31,643.[1] It manufactures padlock and supplies lock components to the rural artisans in the neighbouring villages.

Manufacture of polo balls

The manufacture of polo balls, a unique cottage industry, is carried on at Deulpur in Panchla thana. The balls are made from bamboo stumps which are rounded by hand with the help of wooden grooves. The painting and finishing are done in Calcutta. No recent statistics are available but in 1938-39 about a lakh of polo balls were produced by some 125 local artisans. Since Independence there has been a decline in the demand for this commodity resulting in a severe fall in its output.

Football and shuttle-cocks

Another unusual cottage industry is the manufacture of footballs and shuttlecocks which is carried on in the village of Baniban in Uluberia P.S. About 32 men are now employed in this craft whose products find ready sale on the Calcutta market.

Hair-wig industry

Hair-wigs worn by actors and actresses are produced in the villages of Panchla, Chara Panchla, Kulai, and Biki Hakola (all in Panchla P.S.) by a number of traditional craftsmen of whom, in 1967, 80 were whole-time and 150 part-time workers. In 1966-67 the wigs produced by these artisans were valued at Rs. 30,000 approximately. The implements used are wooden replicas of human heads, scissors, needles, combs and the like. The manufacturing process consists of bunching and washing the hairs first which are then sorted out according to their lengths and quality and dyed as required. They are then stitched on to a piece of black net cloth corresponding to the size of the head. The wigs thus prepared are finally polished with oil and thoroughly combed. In a report sent in August 1967 by the Block Development Officer of Panchla, it was stated that the artisans were facing difficulties in procuring raw materials. The report also stated that the prospects of the industry were not bright and that a Government loan of Rs. 400 only was made available to one solitary hair-wig artisan during 1965-66.

Rise of new industries

Many villages of the Sadar subdivision having good communication links with Howrah city and lying not far from it have long been found suitable for the growth of small industries. The progress made during the three Plan periods and rural electrification programmes executed recently have added to this bias for new industries to come up in these hitherto virgin areas. Repair of automobiles, bicycles and watches, manufacture of furniture and cutlery, textile printing and tailoring are some of the semi-urban industries largely practised in these villages which are quite distinct from the traditional rural occupations like paddy husking, hand-pounding of rice, *gur* (molasses) making, oil pressing etc. Some of the industries already described,

[1] Source: Directorate of Industries, West Bengal.

namely manufacture of polo balls, footballs and shuttlecocks are also of recent origin. In many cases the growth of new industries has been facilitated by the availability of electricity in the rural areas.

POWER

There is no hydroelectric or thermal power station in the district which, comprising the foremost industrial region in West Bengal, consumes nonetheless a large quantity of power for running its myriad industries. Prior to the enactment of the Electricity Supply Act, 1948, the Calcutta Electricity Supply Corporation Ltd., a private licensee, used to distribute power in the district over a small area lying along the Bhagirathi. Towns like Howrah and Baly were electrified by it before Independence. The West Bengal State Electricity Board was constituted on May 1, 1955 and a comprehensive development programme was immediately drawn up by it for speedy electrification of many towns and villages. Overhead high voltage distributing mains were drawn by the Board from Howrah to Anantapur *via* Bauria, Uluberia, Bagnan and other places. The National Power Supply Corporation Ltd., a private licensee, was entrusted by the State Government to electrify the Andul-Mahiari area, the power distributed by them being supplied in bulk by the State Electricity Board. There being no generating station in the district, all power consumed here is obtained from the generating station of the C.E.S.C. Ltd. situated in the 24-Parganas as also from the D.V.C. system.[1] Of late, the Board has commenced supplying power from its Bandel Thermal Plant situated in the Hooghly district. It may be mentioned here that 3 extra high-voltage major sub-stations, namely a 132 KV sub-station of the D.V.C. at Botanic Garden, a 132 KV sub-station at Lilua and another 132 KV sub-station of the Board supply power to Calcutta and its neighbouring areas on the left bank of the Bhagirathi.

The land resources of West Bengal being very limited, speedier industrialization is considered essential to cope with the growing pressure of an ever increasing population. In fact, since Independence the rate of industrial growth has been so rapid in the Greater Calcutta area that the generation of electricity has not been able to keep pace with it. This disparity has been more marked in Howrah which is the most industrially advanced district in the State. The following statement would indicate the total quantities of energy purchased and consumed in the district of Howrah during the years 1964-65 and 1965-66.[2]

ENERGY PURCHASED AND CONSUMED IN HOWRAH DISTRICT DURING 1964-65 AND 1965-66

(In kilo-watt hours)

	1964-65	1965-66
Energy purchased	1,43,66,624	1,24,51,212
Energy consumed	1,30,60,568	1,13,19,284

contd.

[1] Source: Divisional Engineer (Commercial), West Bengal State Electricity Board.

[2] Source: As before.

ENERGY PURCHASED AND CONSUMED IN HOWRAH DISTRICT DURING 1964-65 AND 1965-66.—*contd.*

	(In kilo-watt hours) 1964-65	1965-66
Industrial consumption	1,07,67,847	95,31,803
Non-industrial consumption	22,92,721	17,87,481

Rural electrification scheme

During the First and Second Plan periods it was hardly possible to give adequate attention to rural electrification as the available funds had to be utilized with priority for increasing the overall generating capacity and extending high voltage transmission and low voltage distribution lines to towns which were not served with power. Some progress was, however, made in this direction during the Third Plan as would be evident from the following table giving particulars of the towns and villages in the district electrified up to the end of March, 1966.

PLACES ELECTRIFIED IN HOWRAH DISTRICT
(As on March 31, 1966[1])

Sl. No.	Name of Place	Police Station	Town or Village	Date of electrification
Howrah (Sadar) Subdivision				
1.	Balgachhi	Baly	Village	June 1956
2.	Baly (rural)	"	"	" "
3.	Baly (urban)	"	Town	Before 1951
4.	Bamangachhi	"	Village	June 1956
5	Belgachhi Kismat	"	"	" "
6.	Belur	"	Town	Before 1951
7.	Lilua	"	"	" "
8.	Ankurhati	Domjur	Village	1965-66
9.	Bankra	"	"	June 1956
10.	Dakshin Jhapardaha	"	"	" "
11.	Domjur	"	Town	" "
12.	Kantila	"	Village	" "
13.	Khantora	"	"	May 1961
14.	Mahiari	"	"	1.10.62
15.	Makardaha	"	"	June 1956
16.	Purba Naopara	"	"	" "
17.	Uttar Jhapardaha	"	"	" "
18.	Howrah	Howrah	Town	Before 1951
19.	Baltikuri	Jagachha	"	June 1956
20.	Dharsa	"	Village	8.6.56
21.	Ichhapur	"	"	Before 1951
22.	Jagachha	"	Town	8.6.56
23.	Puilya	"	Village	June 1956
24.	Sahanpur	"	"	" "
25.	Santragachhi	"	Town	8.6.56
26.	Sultanpur	"	Village	1965-66
27.	Unsani	"	Town	"
28.	Uttar Baksara	"	Village	Before 1951
29.	Ballabhbati	Jagatballavpur	"	1965-66
30.	Bamunpara	"	"	1.11.62
31.	Bankul	"	"	1.6.58
32.	Bargachhia	"	"	"
33.	Narendrapur	"	"	1965-66
34.	Patihal	"	"	1.6.58

contd.

[1] Source: As before.

PLACES ELECTRIFIED IN HOWRAH DISTRICT
(As on March 31, 1966).—*contd.*

Sl. No.	Name of Place	Police Station	Town or Village	Date of electrification
	Howrah (Sadar) Subdivision—Contd.			
35.	Sekrahati	Jagatballavpur	Village	1.11.62
36.	Panchla	Panchla	Town	1.6.63
37.	Andul	Sankrail	"	June 1956
38.	Argari	"	Village	Before 1951
39.	Banupur	"	"	" "
40.	Chak Radha Dasi	"	"	1965-66
41.	Duilya	"	"	June 1956
42.	Goaberia	"	"	Before 1951
43.	Hatgachha	"	"	" "
44.	Jhorhat	"	Town	June 1956
45.	Kamranga	"	Village	Before 1951
46.	Manikpur	"	Town	" "
47.	Masila	"	Village	" "
48.	Podara	"	"	" "
49.	Ramchandrapur	"	"	" "
50.	Sankrail	"	Town	" "
51.	Thana Makua	"	Village	" "
	Uluberia Subdivision			
52.	Amta	Amta	Town	15.10.58
53.	Serajbati	"	Village	"
54.	Bagnan	Bagnan	"	4.12.56
55.	Chak Kamala	"	"	"
56.	Deulti	"	"	"
57.	Khadinan	"	"	1965-66
58.	Khalor	"	"	4.12.56
59.	Mahadevpur	"	"	1965-66
60.	Baulkhali	Bauria	"	Before 1951
61.	Bauria	"	Town	" "
62.	Burikhali	"	"	" "
63.	Chak Madhu	"	Village	" "
64.	Fort Gloster	"	Town	1965-66
65.	Radhanagar	"	Village	Before 1951
66.	Rameswarnagar	"	"	1965-66
67.	Anantapur	Syampur	"	5.11.57
68.	Naul	"	"	1 6 63
69.	Bahir Gangarampur	Uluberia	"	4.12.56
70.	Banitabala	"	Town	"
71.	Chengail	"	"	Before 1951
72.	Gangarampur	"	Village	1965-66
73.	Jadurberia	"	"	4.12.56
74.	Jagadispur	"	"	1965-66
75.	Sijberia	"	"	Before 1951
76.	Uluberia	"	Town	4.12.56

Extension of electricity during the Fourth Plan

Supply of electricity will be further extended in the district during the Fourth Plan. Besides meeting the existing commitments, this will provide facilities for lift irrigation as also for operating deep tube-wells of which only 3 out of 14 in the district could be energized up to 1966-67. Power requirements during the Fourth Plan for implementing the development schemes of the State Agriculture Department will be quite substantial and this has already been taken into account in preparing the load forecast of the said Plan.

Industrial and non-industrial consumption

Power is supplied to the district by the State Electricity Board, the Damodar Valley Corporation, the Calcutta Electric Supply Corporation Ltd. and the National Power Supply Corporation Ltd.

The last two agencies are private licensees of which the former is by far the bigger. The D.V.C. does not supply any electricity direct to the district; energy supplied by it is collected in bulk by the C.E.S.C. Ltd. and distributed in the district. No power is purchased from any neighbouring State for consumption in the district of Howrah. The following statements would indicate the energy consumed for industrial and non-industrial purposes in the district for a period of four years from 1962-63 to 1965-66. The suppliers include only the State Electricity Board and the National Power Supply Corporation Ltd. No separate figures for the district are available from the Calcutta Electric Supply Corporation and the supply made by it is, therefore, not included in this statement.[1]

SALE OF ELECTRICITY TO ULTIMATE CONSUMERS IN HOWRAH DISTRICT DURING 1962-63 TO 1965-66

Supplying Agency	Total units sold	Industrial consumption	Non-industrial consumption
1962-63			
State Electricity Board	84,99,393	71,55,292	13,44,101
Private	2,86,339	47,041	2,39,298
1963-64			
State Electricity Board	98,33,089	83,24,702	15,08,387
Private	3,18,939	54,655	2,64,284
1964-65			
State Electricity Board	1,26,69,214	1,07,04,475	19,64,739
Private	3,91,354	63,372	3,27,982
1965-66			
State Electricity Board	1,08,54,204	94,33,332	14,20,872
Private	4,65,080	98,471	3,66,609

INDUSTRIES AND MANUFACTURES OF THE DISTRICT

Mining and heavy industries

Ship-building and ship-repairing

There are no mines, collieries or automobile factories in the district. Of its heavy industries, the earliest relate to ship-building and ship-repairing which date back to A.D. 1706 when we find references being made about "repairing and building of ships' bottoms."[2] The old-time anchorage at Betor was perhaps the chief determinant in locating the ship-building and ship-repairing docks on the Howrah side of the Bhagirathi. It appears to have been the first large industry in the district worked with European capital and management. In the old Howrah District Gazetteer published in 1909, it was stated that "the deep stream then flowed along the northern part of the town (Howrah), crossing to the Calcutta side below the present Armenian Ghat, and on the right bank of the Hooghly from Ghusuri to Howrah extended a series of docks and rope works. These continued to be the principal industries during the first half of the 19th century."[3]

The history of the ship-building and ship-repairing industry of

[1] Source: As before.
[2] Capt. A. Hamilton—A New Account of the East Indies. London, 1744. p. 12.
[3] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 105.

Howrah since the establishment of a dockyard in 1796 at Salkia by one Mr. Bacon up to 1965 has been elaborately dealt with in the Appendix at the end of this chapter and need not be repeated here.

In 1965 there were 14 ship-building and ship-repairing establishments in Howrah spread over the western bank of the river from Baly in the north to Nazirganj in the south, the heaviest concentration being in the central Salkia area where the industry had first taken its root. Incidentally, of all the States in India, this industry located at Howrah district happens to be the largest. Of the 14 establishments, the foremost was the Port Engineering Works located at Nazirganj (near the Botanic Garden) which employed 1,019 persons in 1965. Next came the Hooghly Docking & Engineering Co. Ltd., situated at Salkia and employing in 1965, 835 workers which fell from a larger total of 1,154 in 1953. The third is Shalimar Works (P) Ltd. located at Sibpur, employing 633 persons in 1965. All these big concerns build tugs, small oil-tankers, steam, motor or diesel launches, besides barges, boats and 'dinghies', which are a kind of small local boats. Some of the workshops also build flats and pantoons. Repairing work is also undertaken by them but this kind of work is mostly done by the remaining 11 smaller units employing between 184 and 30 workers.[1] The Hooghly Docking & Engineering Works and the Shalimar Works build and repair sea-going vessels in addition to smaller crafts. The former has its own dry dock which, incidentally, is the only of its kind in this part of the country. Besides ship-building, the former undertakes other kinds of major engineering jobs such as construction of locomotives, vertical and marine types of boiler etc. In 1965 the 14 ship-building and ship-repairing units employed between them, 3,397 workers and 11 of them with 2,049 workers were located within the municipal limits of Howrah city.

Roperies

"The roperies of Howrah", according to O'Malley and M. Chakravarti, "are probably even older than the dockyards. The map of Calcutta and its environs prepared from a survey made in 1792 and 1793 by A. Upjohn shows on the north and south of Salkia Point two lanes named 'Rope Walk' which evidently proves there were roperies on them.[2] C. N. Banerjei has also stated that the earliest industrial concerns at Ghusuri was "the rope walk and screw house supposed to have been established about a century ago by the Stalkarks."[3] An even earlier mention of the existence of a ropery at Ghusuri is found in Mark Wood's map of 1782-83. The origin of the industry no doubt depended on the large demand of strong ropes presented by the ships' crews visiting the various dockyards on the Howrah side of the river. Subsequently, twine and cordage also began to be manufactured in most of these establishments. A detailed

[1] Source: Chief Inspector of Factories, West Bengal.
[2] L. S. S. O'Malley & M. Chakravarti—op. cit. p. 208.
[3] C. N. Banerjei—op. cit. p. 84.

history of the growth of the industry has been given in the Appendix at the end of this chapter and need not be repeated here. In 1965, the district had 9 registered factories engaged in the manufacture of ropes, twines and cordages employing 2,209 workers in all. The foremost among them were Messrs. Ganges Rope Co. Ltd. at Sibpur employing 766 persons, the Shalimar Rope Works Ltd. at Sibpur employing 701 workers, Messrs. W. H. Harton & Co. Ltd. at Ghusuri employing 389 labourers and Messrs. Prabhat Marketing Co. Ltd. at Sibpur employing 135 hands.

Large-scale industries

It has been stated in the preceding paragraphs that the earliest large-scale industries, namely ship-building and roperies, were fairly well established in the district towards the end of the 18th century. Other industries like textiles and paints came on the scene at Sibpur, Ghusuri and Howrah before 1825. Paper, canvas, distillery and jute factories followed in quick succession. Large jute manufactories like the Howrah Jute Mills and the Ganges Jute Mills were started in 1874-75 simultaneously with the establishment of chemicals, wood, oil and printing firms. The growth of big industries in the district was greatly influenced by Howrah's becoming an important railway terminus since 1854 as also by the extension of the railway lines up to Mughalsarai in 1862. The American Civil War of 1861-65 and the opening of the Howrah Pontoon Bridge in 1874 also accelerated their growth. The *Swadeshi* movement of 1905 gave a powerful impetus to the establishment of a number of jute, iron, steel and engineering factories besides a large number of small-scale units. By 1925 Howrah had no less than a hundred big industrial firms. The Second World War of 1939-45 led to a phenomenal increase in the number of small and medium scale engineering industries which became nearly twice as many during this period. The partition of the country in 1947 brought in its wake a crisis in the jute industry due to India's losing the richest jute producing areas which went to Pakistan. This resulted in the closure of most of the jute mills in Howrah district which had to go, over a long period, through a programme of rationalization and modernization. Howrah has today a complex industrial base spread over a rather narrow and highly congested strip of land along the Bhagirathi which profoundly influences the industrial economy of West Bengal as also of India with its myriad large, medium and small industrial units producing a diverse range of commodities, albeit suffering from unplanned growth and toiling with largely inadequate machinery and meagre capital resources but with a fine tradition of skilled craftsmanship which has earned for it the name 'Sheffield of India'.

The industrial progress of the district from 1939 (when the Second World War started) to 1965-66 is reflected in the increase in the numbers of registered factories and the employment offered by them as shown in the following table.

	No. of factories registered under the Factories Act	Employment in registered factories	Growth of employment per annum (compound)
World War II			
1939	218	1,10,542	
1940	242	1,13,395	
1941	279	1,28,921	
1942	280	1,23,822	
1943	304	1,31,771	
1944	321	1,33,758	
1945	338	1,33,471	3.2%(1939-45)
Post World War II			
1946	343	1,31,697	
1947	376	1,30,699	—1.0%(1945-47)
Post Independence			
1948	389	1,34,016	
1949	417	1,28,996	
1950	482	1,20,694	—1.01%(1947-51)
Five Year Plan Periods			
1951	541	1,26,180	
1961	866	1,43,431	1.3%(1951-61)
1965	1,206	1,82,421	6.2%(1961-65)

The preceding table shows that industrial employment in the registered factories during the post World War II period and after the partition of the country showed a general downward trend accompanied, paradoxically, by a growth in the number of registered factories although during the hostilities (1939-1945) the rate of growth of industrial employment was 3.2% per annum compound. The Second World War opened up enormous opportunities for the development of diverse industries and created an unprecedented demand for jute and engineering goods. Soon after the cessation of hostilities, the effect of the partition of the country was keenly felt by the jute industry although the engineering industry continued to grow. In the post-Independence period, in spite of a decline in the overall industrial employment position between 1947 and 1951, a new phase of development began with the commencement of the First Five Year Plan in 1951 and the district continued to add to its complex and varied industrial structure. The unprecedented growth of employment at 6.2% per annum compound recorded during 1961-1965 in the registered factories of the district compares very

favourably with the West Bengal figure of 5.4% for the corresponding period. Incidentally, the non-registered factories in the district employ at the present moment nearly half the total number of industrial workers as would be evident from the following table.

Year	No. of workers in non-registered factories in Howrah district	Percentage of total industrial employment in Howrah district
1951	66,724	34.6
1961	1,04,051	42.0
1965	1,62,257	47.0

Although detailed industrial statistics for the entire district are not available, the Industrial Survey conducted by the Calcutta Metropolitan Planning Organization in 1962 reveals interesting data (given below) about manufacturing industries within the city of Howrah.

	In crores of rupees
Total productive capital	60.32
Total gross industrial output	90.41
Total input	64.60
Total gross value added	25.81
Total wages	11.35

With this general background of large-scale industries in the district, it may now be opportune to deal with the various big industries in groups and some of the large units individually.

Jute industry

The jute industry is one of the key industries in the economy of West Bengal and in respect of foreign exchange earnings, it is second in importance only to the tea plantations. In spite of its dependence on foreign markets for the sale of its products as also for the procurement of a sizeable quantity of the raw materials, it has, on the whole, succeeded in enjoying a good measure of prosperity in recent years after a setback immediately after the partition of the country.

The history of the growth of the industry since the first jute screw was set up at Ghusuri in 1796 or the first jute mill started at Fort Gloster (Bauria P.S.) in 1873 has been too elaborately dealt with in the Appendix at the end of this chapter to need any repetition here. It would suffice for us to touch upon in passing some of the salient periods in the course of its tortuous growth. The old Howrah District Gazetteer published in 1909 stated: "The export of jute to Europe, in loose fibres or in pressed bales, and its manufacture into yarns, bags and cloths have given rise to an industry of immense economic

importance in the district. In fact, the jute mills are predominant among the industrial concerns conducted on European lines."[1] The following extract from the Settlement Report of the district for 1934-39 would give an idea of the working of the jute industry in those days. "Normally, about three to four thousand hands work in a jute mill on an average even now; previously, the number used to be larger. The normal working hours for a full grown adult are usually 10 hours a day for 6 days in the week or rather 5½ days, for the mills work half day on Saturdays. Owing to economic depression the working days are sometimes reduced to five and sometimes even to four days a week. Those below 12 years of age do not work for more than five hours a day, and are not allowed to stay within the mill area for more than seven hours a day. The payment is made weekly and wages are calculated on hourly basis, the usual coolie rate varying from one to two annas per hour. The rate varies with the nature of the work and the special skill involved. The average daily wages of an artisan are about twelve annas per head and that of a clerk one rupee."[2] The same Report tells that in those days about 44% of the jute mill workers were Bengalis, 23% came from Bihar and Uttar Pradesh, 20% from Orissa, 10% from Madhya Pradesh and 3% from Madras.

It may be worthwhile to look into the position of the industry during the years immediately preceding and following Independence as revealed in the table below giving employment statistics for the relevant years.

AVERAGE DAILY NUMBER OF WORKERS EMPLOYED IN JUTE MILLS OF HOWRAH DISTRICT DURING 1945-49

Year	Male	Female	Total
1945	52,390	7,095	59,485
1946	54,810	7,803	62,613
1947	58,128	7,771	65,899
1948	62,454	7,755	70,209
1949	59,548	7,182	66,730

The latest employment figures are given in the following table[3]

AVERAGE DAILY NUMBER OF WORKERS EMPLOYED IN JUTE MILLS OF HOWRAH DISTRICT DURING 1955-65

Year	No. of workers
1955	62,506
1960	51,858
1964	62,033
1965	69,801

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 111.
[2] Final Report on the Survey & Settlement Operations in the district of Howrah: 1934-39. Calcutta, 1940.
[3] Source: Deputy Chief Inspector of Factories, West Bengal.

The recent increase in overall employment is also reflected in a corresponding increase in the total loomage as revealed in the following table.[1]

Year	No. of jute looms in the district
1950-51	11,388
1960-61	12,028
1965-66	12,878

Over the same period production of jute goods also showed a steep rise as is indicated from the table below.[2]

PRODUCTION OF JUTE GOODS IN HOWRAH DISTRICT BETWEEN 1950-51 AND 1965-66

Year	Goods produced (in thousand tonnes)
1950-51	156.2
1960-61	191.1
1965-66	243.1

An idea of despatches of jute goods consisting chiefly of hessian, sacking, carpet backing as also other goods for external and internal consumption can be had from the following statement.[3]

DESPATCHES OF JUTE GOODS FROM MILLS IN HOWRAH DISTRICT BETWEEN 1950-51 AND 1965-66 (in thousand tonnes)

	For external consumption					For internal consumption			
Year	Hessian	Sacking	Carpet backing	Others	Total	Hessian	Sacking	Others	Total
1950-51	56.2	72.6	—	1.3	130.1	2.6	12.1	2.5	17.2
1960-61	54.7	75.6	—	14.1	144.4	4.5	36.6	3.6	44.7
1965-66	66.4	57.3	17.5	11.9	153.1	10.9	60.7	3.6	75.2

In 1965, 20 jute mills were operating in the district and the total number of workers employed in them was 69,801. Of these mills, Messrs. National Co. Ltd. of Rajganj (Sankrail P.S.) employed the largest number of workers, namely 7,028 in 1965. Next came Ludlow Jute Co. Ltd. of Chengail (Uluberia P.S.) employing 6,411 workers in the same year. Five other mills, namely the Fort Gloster Industries Ltd. (New Mill) at Fort Gloster (Bauria P.S.), the Howrah Jute Mill No. I at Sibpur, Howrah, the Delta Jute Mills Co. Ltd. at Manikpur (Sankrail P.S.), Sree Hanuman Jute Mill at Jogendranath Mukherjee

[1-2] Source: Indian Jute Mills Association, West Bengal.
[3] Source: As before.

Road, Howrah and the National Co. Ltd. (No. 2 Mill) at Banipur (Sankrail P.S.) employed in 1965 more than 4,000 workers each. Five other jute mills, namely Fort William Co. Ltd. at Rajnarain Raichowdhury Ghat Road, Sibpur, the Baly Jute Co. Ltd. at Baly, Shree Ambika Jute Mills Ltd. at Belur (Baly P.S.), the Premchand Jute Mills at Chengail (Uluberia P.S.) and the Fort Gloster North Mill at Nalpur (Bauria P.S.) employed between 3,000 and 4,000 workers in the same year. The rest are smaller establishments, the smallest, the Bharat Refine Factory Ltd. at Malipanchghara, employed only 213 persons.

In the following paragraphs a brief account[1] is given of the National Co. Ltd. at Rajganj and the Delta Jute Mills Co. Ltd. at Manikpur which may be taken as fairly representative units of the jute industry of the district.

National Company Ltd.

The jute mill of Messrs. National Co. Ltd. is situated at Rajganj (Sankrail P.S.) not far from the Andul railway station on the Howrah-Kharagpur section of the South Eastern Railway. It covers an area of 60.28 acres, the covered factory area being 6,97,000 sq. ft.

The factory started manufacturing in 1917, the chief products being hessian, gunny bags and jute twine. In 1959 it began producing carpet backing cloth, both broad and narrow. Since 1961 it has been producing cotton bagging also. In 1965-66 it had a fully subscribed share capital of Rs. 40 lakhs. Reserves and surpluses amounted to Rs. 1,06,86,625 while secured and unsecured loans amounted to an aggregate of Rs. 5,96,86,938. The fixed assets of the Company were valued at Rs. 3,27,07,154 in the same year when it had 976 Ordinary and 62 Preference share-holders.

In 1965-66, the factory produced 7,451 metric tonnes of hessian, 14,505 metric tonnes of sacking and 11,957 metric tonnes of carpet backing cloth. Its present expansion targets are as follows: broad loom 20,000 metric tonnes, hessian 12,500 metric tonnes and sacking 17,500 metric tonnes.

The jute mill employs 250 officers (with an average emolument of Rs. 600 per month), 250 clerks (earning Rs. 150 each per month), 80 durwans (on an average monthly pay of Rs. 125) and 8,000 workers with an average monthly earning of Rs. 100 each. Dearness allowance is revised every six months according to the Cost of Living Index and is paid in terms of the award of the Jute Wage Board. Bonus is also paid according to law. Old age pension is admissible only to such workers as were appointed prior to 1948. Sickness insurance also operates here under the supervision of the Employees' State Insurance Corporation. Residential accommodation is provided to the employees as far as possible. There is a dispensary with a doctor and three compounders besides a creche to look after the children of

[1] Source: Office Master, National Co. Ltd. and Secretary, Delta Jute Mills Co. Ltd.

the workers. The management runs three schools, one for the children of the superior staff and the other for those of the workers. Two Trade Unions function here but none is recognized. One of them is affiliated to the A.I.T.U.C. and the other to I.N.T.U.C. The former owns the allegiance of the majority of workers.

This jute mill is the largest of its kind in India having a full complement of modern machinery. Its entire production of broad-loom carpet bagging is exported to the U.S.A. which earns a large amount of foreign exchange for the country.

The Delta Jute Mills

Located at Manikpur (Sankrail P.S.) three miles from the Sankrail railway station on the Howrah-Kharagpur section of the South Eastern Railway, the Delta Jute Mill is one of the foremost in the district occupying a land area of about 86.15 acres and a covered factory area of 3,31,923 sq. ft. It was established in 1897 by Messrs. Andrew Yule & Co. Ltd. who are responsible to the Board of Directors for every aspect of planning and implementation of the Company's development.

The jute mill started with a share capital of Rs. 12 lakhs only which in 1967 was augmented to an authorized capital of Rs. 70,10,000 of which Rs. 70,06,300 was subscribed. There is a proposal at present for its merger with the Budge Budge Jute Mills Co. Ltd. and the Cheviot Mills Co. Ltd. when the combined capital structure is expected to rise to Rs. 3,00,00,000 of which Rs. 1,97,81,840 is already subscribed. The present fixed assets of the Company, less depreciation, are worth Rs. 92,37,546. This will be substantially augmented when the amalgamation with the other two mills takes place. The present Company has 993 Preference and 175 Ordinary share-holders whose numbers will also increase after the proposed merger.

The mill collects its raw materials from various places in West Bengal, Assam, Bihar, Orissa and Thailand. Its production of hessian, sacking and twine, over the last three years, was as below:

Product	Year ending 30.11.64	Year ending 30.11.65	Year ending 30.11.66
Hessian	14,186 tons	13,411 tons	13,239 tons
Sacking	6,937 ,,	5,668 ,,	2,706 ,,
Twine	517 ,,	487 ,,	199 ,,
Total	21,640 ,,	19,566 ,,	16,144 ,,

The mill employs 2,880 skilled workers, 1,431 unskilled workers, 125 clerical staff, 18 pushers and 26 supervisors who make up for a total of 4,480 employees. Their basic wages and emoluments are paid in accordance with the Jute Mills' Wage Board Award. Variable dearness allowance is admissible according to the recommendations of the same Board. Bonus is also paid each year consistent with the terms of the Payment of Bonus Act, 1965. Residential accommoda-

tion is provided within the factory precincts to a large percentage of the workers. The mill has a dispensary and an ambulance. The workers are also insured against sickness, accident and maternity risks under the Employees' State Insurance Scheme. There are three primary schools for the workers' children. Retiring benefits like gratuity and provident fund are also available to the employees.

There is a Works Committee elected by the employees to liaise with the management.

Cotton textile industry

"Cotton-spinning and the weaving of cloth in Howrah date back to the early days of British administration. As early as 1796 a Mr. Samuel Clark wrote from Ghusuri that he had been employed by the East India Company 'for the past two years in receiving, packing and screwing *paut* (jute) and *sun* (hemp) for England.' "[1] A cotton screw for packing and screwing cotton is known to have existed at Salkia in 1797.[2] The Bauria Cotton Mills, said to be the first of its kind in India, started work in 1817 or 1822. A detailed account of the early history of the cotton textile industry in the district has been given in the Appendix at the end of this chapter. It would, therefore, suffice for our purpose to mention briefly the salient features in its later phase of development.

In 1939 there were 5 cotton mills in the district employing 5,373 workers of whom 5,038 were males and 335 females. The growth of the industry during the following decade would be evident from the fact that there were 13 cotton mills in the district in 1949 employing a much larger number of operatives as would be evident from the table below.

NO. OF WORKERS IN COTTON MILLS OF HOWRAH DISTRICT DURING 1947-49

Year	No. of Workers		
	Males	Females	Total
1947	7,515	503	8,018
1948	7,800	448	8,248
1949	8,219	442	8,661

The industry registered a phenomenal growth during the decade 1955-65 when the number of cotton mills in the district rose from 10 to 39. The most important of them was the Bauria Cotton Mills which employed 3,555 workers in 1965. In the same year the Central Cotton Mills Ltd. at Girish Ghosh Road, Howrah had a labour force of 2,554 and the Howrah Cotton Mills Ltd. at Old Banaras Road, Howrah had 1,038. Among the medium-sized units were Shree Hanuman Cotton Mills Ltd. of Phuleswar (Uluberia P.S.), Anantapur

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 110.
[2] G. Toynbee—A Sketch of the Administration of the Hooghly District (1888). p. 92.

Textiles Ltd. of Anantapur (Syampur P.S.), Victoria Cotton Mills Ltd. at Dr. H. K. Chatterjee Lane, Howrah and Arati Cotton Mills Ltd. of Dasnagar (Jagachha P.S.) which employed, in that year, between 500 and 800 workers. The growth of the industry in recent times will also be evident from the following table.[1]

DEVELOPMENT OF COTTON MILLS IN HOWRAH DISTRICT DURING THE PERIOD 1955-65

Year	No. of cotton mills	Total No. of workers employed
1955	10	7,395
1960	17	9,768
1964	25	10,380
1965	39	11,054

Other large-scale industries

Other large-scale industries in the district include big engineering firms, railway workshops, paint and varnish factories, aluminium works, machinery manufacturing units etc. These would be dealt with in two groups: (1) big engineering industries and (2) other miscellaneous large-scale industries.

Big engineering industries

The requirements of the ship-building, rope-making and textile industries prompted the growth of foundries and engineering works at Howrah. The first factory to be started in this category was the Albion Mill erected by W. Jones before 1811 at Sibpur. The foremost among these establishments today is the one set up by Messrs. Burn & Co. at Telkalghat in 1896. Having originated early in the 19th century, the big engineering industry now spreads over different parts of the city and its environs and undertakes diverse engineering jobs dealt with in details in the Appendix at the end of this chapter which also gives a brief history of their growth. It would suffice for our present purpose therefore to describe a few leading engineering firms individually from which the characteristic features of this industry would be apparent.

Eastern Railway Carriage & Wagon Workshop, Lilua

With the inauguration of the railways in 1854, the need was felt for establishing a workshop for construction and maintenance of rolling stock. In 1897 the Directors of the East Indian Railway Co. approved of the setting up of a unit of this kind at Lilua, 3 miles from the Howrah railway terminus, and it started functioning in 1900, the office building being formally declared open in 1903. In course of the last 70 years or so the unit has developed into one of the biggest carriage and wagon workshops of the Indian Railways.

The workshop is situated about a furlong north-east of the Lilua railway station with a total area of 74 acres of which 24 acres cons-

[1] Source: Chief Inspector of Factories, West Bengal.

titute the covered factory area. It is chiefly engaged in periodical overhaul and repair of coaches and goods stock, manufacture and repair of carriage and wagon components, construction and furnishing of new coaches and fabrication of open-type and tank wagons. The factory is equipped with 24 electrical overhead cranes with capacities varying from 2 to 20 tons, 13 air compressors with capacities between 305 cfm and 1,100 cfm, 3 stationary boilers, 536 metal casting tools of various designs besides an adequate fleet of transport vehicles. It has its own electrical power house with sub-stations and the whole undertaking is run by the Government of India in the Ministry of Railways.

The following statement gives an account of the rolling stock outturn of the workshop from 1964-65 to 1966-67.

ROLLING STOCK OUTTURN OF THE EASTERN RAILWAY CARRIAGE & WAGON WORKSHOP, LILUA: 1964-65 TO 1966-67

Year	Periodical overhaul of coaches	Non-periodical overhaul of coaches	Periodical overhaul of wagons	Construction, conversion & furnishing of coaches
1964-65	3,042 units	703 units	8,271 units	99 units
1965-66	3,112 „	800 „	10,265.5 „	114 „
1966-67	2,993 „	1,046 „	11,129 „	74 „

In March 1967 the Mechanical Department of the workshop (which was the biggest of the several departments), employed 14 officers, 536 supervisors, 945 highly skilled artisans, 4,034 skilled artisans, 1,492 semi-skilled artisans, 153 apprentices, 1,646 unskilled workers and 586 clerks. The Stores Department had 5 officers and 140 other staff; the Medical Department 3 officers and 262 other employees; the Electrical Department one officer and 906 workers; and the Accounts Section 2 officers and 206 clerical hands.

Among the various welfare measures provided for the employees, the following may be listed. Residential accommodation is available to 874 of them in the colony attached to the factory where there are 2 junior high schools and 2 primary schools (of which one is in English medium) teaching in all 12,000 students. All non-Gazetted staff whose children are in higher secondary schools are paid full tuition fees for their wards which costs the Railway authorities an amount varying between Rs. 1,60,000 and Rs. 1,80,000 per annum. There is a fully equipped hospital with medical, surgical and maternity wards and outdoor and indoor facilities. A separate chest clinic equipped with an X-ray plant, a laboratory and a modern operation theatre treats outdoor and indoor patients. The hospital has special wings for treating eye and dental cases. There is also a free homoeopathic dispensary under a qualified doctor. The workshop canteen supplies meals and snacks to the employees at subsidized prices. On the recreational side, there are two institutes and a cultural centre

charging nominal admission fees and offering facilities of a library, indoor games and training in vocal and instrumental music. The cultural centre organizes various functions from time to time. There is also a Mahila Samiti which holds classes in needle-work, tailoring and vocal and instrumental music. Employees in financial difficulty are assisted from the Distress Fund which advances Rs. 45 per month for the upkeep of the families of the workers suffering from long-drawn diseases and not entitled to any leave salary. Consumers' co-operative stores function at the workshop's residential colonies at Lilua and Dakshineswar. There is also a co-operative credit society offering loan assistance to its members.

The three trade unions functioning at the workshop and recognized by the Railway administration are branches of the Eastern Railwaymen's Union, the Eastern Railwaymen's Congress and the Eastern Railway Employees' Congress. There is a labour welfare organization to look after staff amenities and to deal with all matters relating to the grievances of the employees.[1]

Port Engineering Works

The Port Engineering Works Ltd. has its factory at Nazirganj (near Botanic Garden, Howrah) which was established in 1910 for repairing plants and machinery of various undertakings under the management of Andrew Yule & Co., the Secretaries and Treasurers of the present Company. In 1917 it started manufacturing machinery and components for sugar, jute, cotton, oil and flour mills in addition to the repair of river and sea-going vessels. During the Second World War it also manufactured huts and assembled boats required by the Navy. In course of the last 10 years it has added the following products to its range of manufacture: centrifugal machines for the sugar industry, rotorvane tea rollers for the tea industry, coal mining machinery, general structural engineering, paper mill machinery and components and special types of high grade C.I. castings. There are plans for expansion of the factory for manufacturing more sophisticated machines, many of which are now imported.

The land area occupied by the factory measures 65,960 sq. metres while its covered area is 20,350 sq. metres. It is a wholly owned subsidiary of Andrew Yule & Co. Ltd. with an authorized and subscribed share capital of Rs. 25 lakhs, the fixed assets, as on December 31, 1966, being Rs. 63,40,800.

The raw materials consist of pig iron, hard coke, steam coal and steel procured by the Company from various producers in West Bengal, Bihar, Orissa and Madhya Pradesh. Copper, tin and zinc are imported from the U.S.A., Malaysia and Australia. The types of engineering machinery turned out by the factory as also the respective annual productions for the 3 years from 1964-65 to 1966-67 are given in the following table.

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[1] Source: Deputy Chief Mechanical Engineer, Eastern Railway, Lilua.

Products	Annual Production		
	1964-65 (Rs.)	1965-66 (Rs.)	1966-67 (Rs.)
Tea machinery	21,51,062	24,61,173	37,62,251
Centrifugal machines	2,15,160	11,14,388	32,19,102
Structurals	6,40,961	6,88,173	1,73,967
Textile machinery	18,80,346	19,75,299	7,05,893
Paper mill machinery	3,04,315	10,48,089	4,81,850
Tugs, barges & other vessels	12,57,198	14,03,414	22,82,114
Jute mill machinery	4,66,388	5,62,828	2,17,928
Coal mining machinery	25,154	1,81,364	23,825
Sugar mill machinery	27,81,023	27,48,303	26,36,302
Chemical plants	—	1,04,858	3,49,280
C.I. castings & other items	23,93,313	28,44,307	22,51,870
Total	1,21,14,920	1,51,32,196	1,61,04,382

In May 1967, the Company employed 294 skilled workers having an average monthly earning of Rs. 220 per head, 523 semi-skilled hands each of whom earned about Rs. 150 per month, 239 unskilled labourers whose per capita earnings averaged Rs. 135 per month, 125 clerks on an average monthly pay of Rs. 250 and 19 first line supervisors drawing an average monthly emolument of Rs. 315.

Dearness allowance and bonus are given to the employees according to law. Old age and sickness insurance is also operative under the relevant Acts. Gratuity is paid to the workers under the Company's own scheme. There are facilities for sports and staging of dramas besides a library subsidized by the Company. A Co-operative Credit Society and a Consumers' Co-operative Store, largely patronized by the workers, function at the mill premises. Residential accommodation is provided to some of the employees within the factory precincts. There is a dispensary under the supervision of a resident doctor, 2 compounders and a dresser.

The Port Engineering Sramik Union, recognized by the management and affiliated to the I.N.T.U.C., has a membership exceeding 500.[1]

Remington Rand of India Ltd.

Messrs. Remington Rand of India Ltd. are a wholly owned subsidiary of Messrs. Sperry Rand Inc. of the U.S.A. having been incorporated in India on March 17, 1952. For 50 years prior to this the Company was engaged in trading and not manufacturing typewriters. When it embarked on the latter course in 1955, indigenous components were negligible in number and more than 1,700 of them which

[1] Source Secretaries & Treasurers of Port Engineering Works Ltd.

go into a typewriter had to be imported. By March 1965, 99.15% of the components were being manufactured by the Company in India. In the same year its annual production of typewriters rose to 28,000. The Company now plans to raise this figure to 36,000 units in the near future when it proposes to introduce a new model of their typewriter.

The factory is located at Sibpur, Howrah on land measuring about 1,80,000 sq. ft. of which the covered factory area is 1,60,000 sq. ft. Apart from its head office in Calcutta and the factory at Howrah, the Company has regional offices in Bombay, New Delhi, Madras, Calcutta and Lucknow and branch offices in the principal towns in India forming a network for distribution and servicing of its products.

In March 1967, the Company had an authorized capital of Rs. 3 crores of which Rs. 1,10,58,500 was subscribed and paid up. In the same month it issued further new shares worth Rs. 32,62,000. Its fixed assets, as in March 1966, were valued at Rs. 89,61,942.

The raw materials include steel, aluminium and brass tubing, alloy and high carbon steel which are imported; the rest of the requirements are procured from local sources.

The following table will indicate the types of products turned out by the factory as also their quantities during the period from 1964-65 to 1966-67.

Products	Installed capacity (annual)	Production		
		1964-65	1965-66	1966-67
Typewriters	24,000	28,610	24,636	28,175
Metal Covers & Base Boards	14,400	6,060	5,206	4,619
Kardex Cabinets	6,000	3,460	3,887	2,788
Card Index	1,800	436	243	Nil
Plan Filing Cabinets	1,800	405	244	Nil
Kompact Filing Cabinets	1,800	130	Nil	Nil
In & Out Trays	30,000	1,375	1,490	875
Line-a-vue	2,500	272	1,233	60
Remington Copyholders	3,000	417	525	225

In June 1967, the factory employed 1,419 skilled and 186 unskilled workers, 172 clerks and 47 supervisory staff. Their per capita monthly earnings averaged Rs. 225, Rs. 171, Rs. 297 and Rs. 596 respectively.

Dearness allowance is admissible to the employees according to the Cost of Living Index and the Tribunal Awards. Approximately, 19% of the profits are annually given to the employees as bonus in addition to an average production bonus of Rs. 47 and Rs. 34 paid to each skilled and unskilled worker respectively. The Company

contributes to the Provident Fund at the rate of 8% of the total salary of each employee who is also entitled to a retirement benefit in the form of gratuity up to a maximum of 20 months' basic pay. The Employees' State Insurance Scheme is operative in the factory which also maintains a dispensary for giving first aid on the factory premises. There is a sports club for recreational and cultural activities. A subsidized canteen supplies meals and snacks to the workers. Of the two recognized trade unions operating in the factory, the Remington Typewriter Employees' Association represents more than three-fourths of the workers, the rest being members of the other organization named Remington Mazdoor Congress. None of these is affiliated to any central trade union organization and the leadership in each of them is internal.[1]

The other miscellaneous large-scale industries consist of aluminium works, paint factories, docking and engineering works, machinery manufacturing concerns, modern roperies and the like. In the following paragraphs a brief account will be given of certain individual units which would make the general characteristics of this branch of industries apparent.

Jeewanlal (1929) Ltd.

Messrs. Jeewanlal (1929) Ltd., who claim to be the largest aluminiumware manufacturing concern in Asia, started their operations in 1911 under the name and style of Jeewanlal & Company which founded the Crown Aluminium Works at Belur in 1928 followed by other factories in Bombay and Madras. In 1929 they entered into a partnership with the renowned Aluminium Ltd., Canada and the present Company was incorporated in the same year. It became completely Indianized in 1951 and was converted into a Public Limited Co. in that year. In 1965 it acquired the aluminium unit of Messrs. Mysore Premier Metal Factory at Madras manufacturing aluminium, brass and stainless steel products. Presently, the Company operates fabricating plants at Calcutta, Bombay and Madras and employs about 2,500 workers and has a sales network spread over India, the Middle East, East Africa, South-East Asia and the Far East.

In December 1965, the Company had an authorized capital of Rs. 2 crores of which Rs. 87 lakhs was subscribed and paid up. Its fixed assets amounted to Rs. 85 lakhs in December 1966. The Belur factory manufactures numerous aluminium articles of various shapes, sizes and designs for household use, building and construction, transportation, electrical and light engineering purposes as also for the chemical and packing industries. It also manufactures various equipments used in offices, hospitals, railways, automobile factories, the plantation industries, paint and varnish undertakings, perfumery and cosmetic establishments, distilleries and flour, leather, pharmaceutical, textile and film industries. Orders are also executed by

[1] Source: Director-Secretary, Remington Rand of India Ltd., Calcutta.

the Company for the Communications and Defence Ministries of the Government of India.

In May 1967, the Company employed 2,500 workers at its various plants in India who were entitled to the benefits of Provident Fund and Gratuity. Subsidized canteens are run by the Company at its various units. The Trade Union functioning at the Crown Aluminium Works, Belur and recognized by the management is styled the Bengal Aluminium Workers' Union.[1]

Shalimar Paints Ltd.

Messrs. Shalimar Paints Ltd., a big paint manufacturing concern having their factory at Goaberia near the Botanic Garden at Sibpur, Howrah, was registered as a Company in December 1902 under the name of Shalimar Paints, Colour and Varnish Co. Ltd. In 1928 it entered into a partnership with Messrs. Pinchin Johnson of England. The Second World War saw a considerable expansion of the factory but in 1962 "the Company broke away from the Managing Agents, changed its name to Shalimar Paints Ltd. and modernized its operations and organization."[2]

In July 1967, the Company had an authorized and subscribed share capital of Rs. 32 lakhs. It produces numerous varieties of paint, colour and varnish for which both indigenous and foreign raw materials are used. During 1966, paints and ancillary products manufactured by it amounted to about 12,300 tonnes. The Company currently employs some 1,100 persons in its various offices in India. The Goaberia factory has 49 persons on the general and technical staff, 157 assistant chemists and clerks and 473 workmen.

The labour welfare activities of the Company include the support it gives to the Goaberia Junior High School for the education of the employees' children. The majority of the factory workers are members of the Shalimar Paint Works Workmen's Union recognized by the management since 1962.

Hooghly Docking & Engineering Co. Ltd.

The Hooghly Docking & Engineering Co. Ltd., founded in 1819, is one of the oldest and best known marine and general engineering firms in India. Their extensive and well-equipped workshop, shipbuilding yard and dry dock at Salkia, Howrah, have been enlarged from time to time since the Company was started as a private concern under the name of Reid & Company's Hooghly Dock. Their dry dock is now the only privately owned dock in the Calcutta area capable of docking deep draft ships; it can accommodate vessels 300 ft. long and 40 ft. broad. Since the construction of the new Howrah Bridge, only small vessels can proceed up the river and the Company therefore undertakes most of the repair work of larger ship at river moorings below the Bridge and inside Kidderpore and King George Docks and, when necessary, in any of the five dry docks

[1] Source: Managing Director, Jeewanlal (1929) Ltd.

[2] Quoted from the report sent by the Advertising Manager, Shalimar Paints Ltd. on which the account is based.

of the Calcutta Port Commissioners. Their own dry dock beyond the Bridge upstream is, however, fully engaged on the repair of craft which can be suitably accommodated there and is also utilized for the fitting out of new construction. The dockside is served by a 10-ton crane and the fitting out jetty by a 15-ton crane.

The shipyard of the Company is well-equipped to handle the construction of all types of river, harbour and coastal craft such as tugs, launches, motor boats, barges etc. Dredgers of all types are built by them under an agreement with the Ellicott Machine Corporation of Baltimore. There are four building berths capable of taking a maximum length of 300 ft. A well-equipped saw mill, woodworking and boat-building sections are located within the shipyard.

The Company also handles a variety of general engineering jobs besides ship repairing work. Marine engines of the steam reciprocating type are built in collaboration with Plenty & Son of Newbury. The construction of locomotive, vertical and marine type boilers and other kinds of pressure vessels is also undertaken.[1]

The Ganges Rope Co. Ltd.

The Ganges Rope Co. Ltd. at Sibpur, Howrah was established in 1903. It covers an area of 11 acres and has its own jetty on the Bhagirathi where lighters are loaded for carrying their products to seagoing vessels.

Ropes and cordages of all manner and description are produced by the factory from jute, hemp, coir, aloe etc. procured from within the country and Manila and sisal fibres purchased from the Philippines and East Africa. The factory is also equipped to manufacture ropes from synthetic fibre like nylon and terylene. With its present plant capacity it can produce 6,000 tons of ropes per annum worth more than a crore of rupees. The Company claims to have the most modern hard and soft fibre spinning plant in the East.

In 1967, it had an authorized and subscribed share capital of Rs. 14 lakhs. Its fixed assets at the end of 1966 were valued at Rs. 16.81 lakhs.

In July 1967, the total earnings of its employees varied from Rs. 92 per month for unskilled workers to Rs. 195 per month for skilled labour. Dearness allowance is linked to the Cost of Living Index. Bonus is paid according to law. A scheme for paying an additional production bonus is also operative at the factory, the payment being made twice a year. The employees are entitled to the facilities of Provident Fund and retiring gratuity. There is a canteen supplying tea and snacks to the workers at subsidized rates. The Employees' State Insurance Scheme is in force in the factory which has also a dispensary under the charge of a Medical Officer.

There are three registered trade unions, one of which, viz. the

[1] Source: Publicity folder issued by the Company.

Rashikal Mazdoor Sabha, affiliated to the Hind Mazdoor Sabha, is recognized by the Company.[1]

India Machinery Co. Ltd.

The India Machinery Co. Ltd. was established in 1938 at Dassnagar (Jagachha P.S.), about three miles west of the Howrah railway station. It occupies an area of 15 acres of which 5 acres form the covered factory area. In 1967, the Company's fixed assets amounted to Rs. 23.3 lakhs and it had an authorized capital of one crore of rupees of which a little more than Rs. 25 lakhs was subscribed and paid up. It produces machine tools, weighing machines and weighbridges (with capacities ranging from 5 kg. to 400,000 kg.), printing and paper cutting machines as also jute and textile machinery. Working only one shift a day, the present plant has an annual capacity to produce 350 weighbridges of various types, 600 platform weighers, 140 machine tools, 100 printing and paper cutting machines and 1,000 jute and textile machinery. The raw materials are chiefly pig iron and hard coke which are obtained from the big producers at Durgapur, Bhilai and other sources.

In April 1967, the factory employed 771 persons in all of whom 149 were unskilled, 270 semi-skilled, 118 skilled and 10 highly skilled workers. The managerial and supervisory staff consisted of 5 persons while there were 24 employees on the technical staff. Their average monthly earnings were: unskilled workers, Rs. 124; semi-skilled workers, Rs. 143; skilled workers, Rs. 194; highly skilled workers, Rs. 281; technical staff, Rs. 316; and managerial and supervisory staff, Rs. 849.

There is a recreation club and a library attached to the factory besides a primary school for the employees' children and a junior high school for girls. Dearness allowance, bonus and insurance facilities are allowed according to law. Residential accommodation is provided to a section of the workers. About 70 per cent of the employees belong to the trade union styled India Machinery Mazdoor Union affiliated to the I.N.T.U.C. and recognized by the management.[2]

Small-scale engineering industries

Engineering establishments form the bulk of the small-scale industries of Howrah. They either produce or process a wide range of engineering products and "function in their own right and also serve as feeders and ancillaries of the giant industrial machinery in Howrah, thus forming a vital part of its economic organization."[3]

In the course of a recent survey conducted between July 1960 and April 1961 by the Jadavpur University under the auspices of the Reserve Bank of India, it was found that excluding the purely trading concerns and numerous small smithies and welding shops, altogether

[1] Source: Assistant Manager, The Ganges Rope Co. Ltd.
[2] Source: General Manager, The India Machinery Co. Ltd.
[3] Social Aspects of Small Industries in India—Unesco Research Centre on Social and Economic Development in Southern Asia. New Delhi, 1962. p. 6.

1,168 producing units were in operation in an area of a little over 10 square miles. "This high density of over 100 engineering units, on an average, per sq. mile is a remarkable feature of Howrah. Contrary to the impression that one may form from this density the units are not all very small; it is indeed surprising to find the large size of employment and capital wealth of many of these firms situated in some narrow lanes of the Municipality where a truck can move with difficulty. The Grand Trunk Road, which runs north-south through the Municipality, is the widest and busiest thoroughfare with 74 engineering units on it, the majority on the north side. The greatest concentration of machine shops is on Belilios Road, branching off from Grand Trunk Road to the west; it has 95 producing units, big and small, almost wall to wall on both sides. Foundries are situated in great number on Banaras Road, also branching off from Grand Trunk Road further north, with 92 producing units on it. Numerous units are also located on Madhusudan Pal Chaudhury Lane, Narasinha Dutt Road, Brindaban Mallick Lane and Sasmal Road, with 40 or more units on each of them. The rest are scattered over more than 150 small roads and lanes."[1]

Of the 1,168 units referred to above, 302 are job shops executing orders of customers as and when they come. Most of them are one to 9-man units and only 22 employ more than 20 workers. "The next most numerous, 290, are manufacturers of machine parts, with a size distribution very similar to that of the job shops, Manufacturers of machines, nuts and bolts, pipes and tubes and foundries together account for a little over another 300 units, with approximately 80 units in each group. In these four groups very small units with one to three men are comparatively few. Taken as a whole, 707 of these 1,168 units employed less than ten persons each; 198 are in the middle range, employing 10 to 19 persons, and 163 employ 20 to 49 persons. Of the remaining 100, 80 employ 50 to 200 persons each. Only 20 employ over 200 persons."[2] One of the most important features of the small engineering firms in Howrah is their close interdependence in farming out of orders. This is one of the main reasons for which, despite congested surroundings, new industrial units are constantly growing up. From an examination of the flow of different types of raw materials into the medium-sized engineering units it is observed that the major buyers from the small units are the big engineering concerns in the Greater Calcutta area, the textile mills, the railways and local dealers, apart from Central Government organizations like the Directorate-General of Supplies and Disposals. On the other hand, important direct buyers from the small units are to be found among themselves for parts of orders received by them and in some

[1] Survey of Small Engineering Units in Howrah: Published by Reserve Bank of India, Calcutta, 1964, pp. 1-2.
[2] Ibid, p. 2.

cases even the whole of the orders are executed by the smaller firms in other categories. "It is this inter-locking of production processes which largely accounts for the strength of the Howrah engineering industry and is the reason why so many new entrants are eager to establish their shops in the over-crowded Municipality."[1]

Raw materials

Raw materials used by these small engineering units are, among others, pig iron, scrap, steel, galvanized sheets, mild steel and non-ferrous metals like copper, aluminium and zinc. From the study undertaken by the Jadavpur University, it was estimated that about 30,000 tons of pig iron, 2,000 tons of steel and 10,000 tons of black sheets were consumed by the 200 medium-sized units surveyed.

Labour

Bengalis are now in a majority in the ranks of skilled artisans employed by this industry as also in the lighter types of factory work. "With the requisite experience attended in them, the Bengalis seem to have become the pioneers in establishing small engineering factories in Howrah. And cultural affinity probably led them to employ Bengali workers. . . . As the occupational history of the employers studied shows, erstwhile workers in such small factories appear to have set up in turn more units in recent years. Thus, the self-generating growth of small engineering industries appears to be a significant phenomenon in the Howrah engineering complex."[2]

Working hours & wages

Each shift consists of 8 hours' work as laid down by law. Overtime wage is paid for extra work. The following table[3] gives the maximum and minimum wages earned by various categories of small engineering workers of Howrah during 1960-61 when the Jadavpur University's team conducted its survey.[4]

Category of workers	Daily wages	
	Maximum (Rs.)	Minimum (Rs.)
Skilled	5.08	3.05
Semi-skilled	3.15	2.14
Unskilled	2.39	1.55
Apprentices	1.41	0.94

The percentage of skilled workers in the small engineering industries is still very high. In many units the owners are actually former workers whose skill and experience are their main assets.

Finance

Loans and advances are taken by these establishments from various sources including commercial banks, money-lenders, State agencies, co-operative societies, friends, relatives and partners. Borrowings from co-operative societies are still very low while those from com-

[1] ibid. pp. 15-16.
[2] Social Aspects of Small Industries in India: Studies in Howrah and Bombay. New Delhi, 1962. pp. 21-22.
[3-4] Survey of Small Engineering Units in Howrah. Calcutta, 1964.

mercial banks have increased in recent years. In fact, commercial banks and private money-lenders constitute the two principal sources of the industry's finance.

Organization

The organization of the small engineering industry of Howrah is one of its weakest points. Besides poor factory space which hinders expansion, the haphazard layout of machines and inexactitude in accounting methods add to the difficulties of rationalizing the industry. The entrepreneur is usually a multipurpose organizer with accounting as one of his functions. Absence of systematic planning in the layout of machines appears to be the result of random execution of job orders on which most of the firms had depended in the past. The Jadavpur University team found that nearly 80 out of the 200 firms surveyed were of the sort which cannot quickly change over from one line of production to another except by introducing drastic changes in equipment.

While some firms get requisite permits for raw materials against Government orders, there are many others which cannot take up any plan for expansion for paucity of raw material supply. This inevitably forces up prices of basic ingredients with the concomitant evil of quota-holders clandestinely selling out their 'permits' at high profits to other consumers without utilizing the raw materials covered by these permits themselves.

To sum up, the small engineering industries of Howrah, because of the multiplicity of their numbers, close inter-dependence among the individual units and easy rise of workers to the status of factory owners, constitute in their entirety something like a vast training institute fostering entrepreneurial ability so much lacking in the country as a whole and especially in West Bengal.

SMALL-SCALE INDUSTRIES

Rice mills

The more important of the small-scale industries of the district are agro-based, e.g. rice, flour and oil mills. The following table[1] gives the number of rice mills in the district and the total employment provided by them over the last 20 years.

Year	No. of rice mills	Total No. of workers employed
1949	3	112
1955	17	1,004
1960	23	1,055
1964	23	857
1965	23	695

It would be apparent at once from the foregoing statement that an increase in the number of units has been accompanied by a fall in

[1] Sources: Census 1951, Howrah District Handbook, Calcutta, 1953, and Chief Inspector of Factories, West Bengal.

overall employment. Out of the 23 rice mills in the district in 1965, 15 were working while 8 had stopped operations presumably due to the restrictions imposed upon them in accordance with the recent procurement policy of the Government. The District Industrial Officer, Howrah reported that in 1966 there were only 4 rice mills in the district, all in Syampur P.S., none of which was actually functioning.

Flour mills

The Phoenex Steam Flour Mill, the first of its kind in the district and belonging to Messrs. Jessop & Co., was set up in the central part of Howrah town before 1849. The growth of the industry since the establishment of this earliest unit has been described in the Appendix to this chapter. In 1965 there were 7 flour mills within the city of Howrah, viz. Bengal Flour Mills Co. Ltd., Howrah Flour Mills (P) Ltd., Hooghly Flour Mills Co. Ltd., Reform Flour Mills (P) Ltd., Master Stores Flour Mill, Sri Krishna Jnanodaya Flour Mills and Sri Ganga Flour Mills employing in all 673 workers.[1] There were besides numerous *chākkiwallās* all over the city grinding wheat in small quantities.

Oil mills

The earliest mustard oil mill in the district was set up by Messrs. Jessop & Co. in 1830 on the riverbank south of the present court buildings from which the immediate vicinity came to be known as Telkalghat, i.e. the oil mill ghat. The growth of this industry has been dealt with in the Appendix at the end of this chapter. In 1965 there were 11 oil mills in the district employing 246 workers. Of them 8 with 146 workers were located within Howrah city. There is a solitary hydrogenated oil factory at Lilua employing 119 persons. Three other factories employing 316 workers produce inedible vegetable and animal oils and fats.

Biḍi-making

In 1962 there were 1,151 *biḍi*-making units in the district, located mainly in the police stations of Amta, Baly, Jagachha, Panchla, Syampur and Uluberia, which provided employment to 2,350 persons The wages of the workers have been fixed under a State Government Notification issued in December 1960 which lays down that in the district of Howrah their monthly rate of pay would be Rs. 54 while the daily rate would be Rs. 2.08 with the provision that no worker shall be asked to accept the latter rate unless he himself so desires. The corresponding piece-rate was fixed at Rs. 2.25 per 1,000 *biḍis* produced. The piece-rate was linked with the Cost of Living Index with an automatic provision that it would rise or fall by 2.05 paise per unit change in the said Index and would take effect when the rise or fall has been for full 10 points. These rates, with slight variations, still operate in the district. An average *biḍi* worker employed in any of the *biḍi* manufactories of the district, therefore, earns between Rs. 60 and 80 per month. The outturn of other, especially women,

[1] Source: Chief Inspector of Factories, West Bengal.

who work at home and in their spare time, are purchased by the dealers at rates mutually settled.

Cold storage

Cold storage, a developing small-scale industry, had 7 units in the district in 1962 most of which were located in Howrah city. The oldest of them was the Parvati Cold Storage at Sibpur, established in 1948, and the largest the Howrah Cold Storage at J. N. Mukherji Road with a capacity of 24,000 quintals. Potato is usually stored in them in bulk followed by other perishable articles like fruits, dry fish, curds etc. The working season normally lasts from March to November. The industry appears to have good prospects in the district since a sizeable proportion of its population dwelling in urban and semi-urban areas have a relatively higher standard of living.

COTTAGE INDUSTRIES

While dealing with the old-time industries of the district an account of the cottage industries which are dead or are in a moribund condition has already been given. Some others which are still functioning have also been dealt with there. We may, therefore, limit our attention now only to those of them which have not been covered so far. Among these are Khadi spinning, handpounding of rice, palm *gur* making, handmade paper, village leather industry, carpentry and blacksmithy which have of late been re-organized with assistance from various agencies.

Financial assistance to rural artisans

For long, the only source of finance open to the rural artisans has been either the money-lender or the trader. Of late, the Block Development Officers have been empowered to disburse within their respective areas loans up to Rs. 400 in each case to deserving craftsmen. The following statement shows the subdivision-wise disbursement of such loans during 1964-65 and the corresponding number of beneficiaries.

Name of subdivision	Amounts of loan disbursed (Rs.)	No. of artisans benefited
Sadar	13,500	42
Uluberia	27,000	129

Khadi & Village Industries Board

In line with the industrial policy statement of the Government of India, a number of rural industries in a near-moribund state has been taken for revival. According to this scheme, the West Bengal Khadi & Village Industries Board disbursed a loan of Rs. 22,917 and a grant of Rs. 17,676 to the Khadi spinning industry between 1960-61 and 1963-64, a loan of Rs. 10,000 and a grant of Rs. 1,038 during the same years for handpounding rice followed by a grant of Rs. 1,800 to the same industry in 1965-66, a loan of Rs. 375 and a grant of Rs. 525 to the palm *gur* industry in 1961-62, a loan of Rs 8,500 to the handmade paper industry in 1965-66, a loan of Rs. 15,000 and a grant of Rs. 4,000 to the village leather industry in 1962-63, a loan of Rs. 2,500

and a grant of Rs. 3,500 to carpentry and blacksmithy industries in 1964-65, a loan of Rs. 16,000 and a grant of Rs. 2,500 to the village pottery industry in 1964-65 and a loan of Rs. 3,800 and a grant of Rs. 800 to the village oil industry in 1961-63.[1]

At the district level, the District Magistrate also disburses various industrial loans to deserving units of cottage and small-scale industries of different categories under the Bengal State Aid to Industries Act. The amount thus disbursed by D.M., Howrah between 1961-62 and 1965-66 have been shown in Chapter VI. The loans advanced by other institutions like the Industrial Finance Corporation of India have also been dealt with in the same chapter.

Loans advanced at State level

During the Third Plan period loans amounting to Rs. 41,62,470 were advanced to various deserving cottage and small-scale industrial units of the district by the Board of Industries, West Bengal as detailed in the following statement.[2]

LOANS DISBURSED BY THE BOARD OF INDUSTRIES, WEST BENGAL TO COTTAGE AND SMALL-SCALE INDUSTRIES IN HOWRAH DISTRICT DURING THE THIRD PLAN

Year	Budget provision (Rs.)	Amount disbursed (Rs.)	No. of units benefited
1961-62	6,00,000	5,12,920	54
1962-63	7,50,000	6,86,870	59
1963-64	9,83,000	9,42,585	96
1964-65	13,75,000	13,21,485	188
1965-66	7,00,000	6,98,610	74
Total	44,08,000	41,62,470	471

Industrial arts

There are a few cottage crafts in the district turning out products which transcend purely utilitarian considerations and reach the realm of art. These are *chikan*, *jari* and solapith industries and artistic pottery and clay-modelling. All these have already been described in the earlier section on old-time industries.

INDUSTRIAL POTENTIAL & PLANS FOR FUTURE DEVELOPMENT

The contemplated programme for Howrah's development, includes the proposed second bridge over the Bhagirathi linking Calcutta and Howrah, the improvement in the local communication system leading on to National Highway No. 2 and National Highway No. 6, the opening of the Durgapur Expressway, the Vivekananda Bridge Link and the Mourigram-Dankuni rail link between the South Eastern and the Eastern Railways, the rail-cum-road link with Haldia *via* Panskura and Mecheda and the establishment of an oil pipe line terminus at Mourigram. All these will profoundly improve Howrah's ability to attract new industrial development.

[1] Source: Executive Officer, West Bengal Khadi & Village Industries Board.
[2] Source: Secretary, Board of Industries, West Bengal.

Sewerage and drainage, the other weak points in Howrah's progress, are also to improve with the introduction of a new sewerage service covering an area of 13,700 acres falling within the Howrah Corporation and parts of the adjacent urban and rural areas. For the time being, the oxidation pond method of sewage disposal is proposed to be taken up with provision for a complete treatment plant co-ordinated with the construction of the new waterworks at Padmapukur *Jalā*.

The Howrah Area Development Plan (1966-86) prepared under the joint auspices of the Calcutta Metropolitan Planning Organization and the Howrah Improvement Trust, envisages 12 specific planning areas comprising a total of 22,765 acres. The existing industrial area in this planning zone is 1,819 acres which is proposed to be increased to 4,788 acres, or 21% of the total land area under planning. The localities to be benefited in particular are: (1) the area north of the Banaras Road up to Durgapur Expressway which is low-lying and undeveloped, (2) the area south of Banaras Road and to the east of National Highway No. 6 and the Howrah Drainage Canal which is already in the process of rapid development, and (3) the area south of the Howrah Drainage Canal and east of National Highway No. 6 stretching up to the river which offers good scope for development of industrial sites. Besides these and beyond the city limits, the Andul Road area is fast developing as an industrial zone which is likely to develop further with the construction of the road bridge over the Rupnarayan linking up with Haldia.

The future industrial progress of Howrah is inexorably tied up with the development of engineering industries. Transportation industries will also have an increasingly important role to play in the context of the improved road system of the future. It has, therefore, been suggested that in the development area between the Belilios Road, the Railways and the road connecting with National Highway No. 6, a major transportation terminal will have to be planned with wholesale markets, godowns and road terminal facilities.

Development in the field of textile industry is likely to be limited to modernization and diversification while in the realm of chemical and allied industries, progress may be expected in directions that would assist the existing engineering and other industries.

As regards agro-based industries, the present annual availability of jute-sticks in the district is of the order of 50,000 tonnes which, along with 1,88,000 tonnes of paddy straw locally available, can provide the raw materials for small and medium-scale pulp board industries. The Amta area is fairly rich in sugar-cane which grows well in the lower Damodar region. With proper planning, the setting up of a sugar mill may be feasible here. In the field of cottage and small-scale industries, handloom, coir and locksmithy are Howrah's strong points and these will continue to progress.

The proposed installation of a refinery, a fertilizer plant and petrochemical industries at Haldia will powerfully influence the future industrial pattern of Howrah. With the availability of synthetic fibres, plastics, rubbers, solvents and industrial chemicals near at hand, a swing towards processing industries based on these seems to be inevitable.

Training institutions

No appraisal of the industrial future of the district is complete without an account of the technical institutions which train the men on whom rests the burden of ushering in that future. Howrah's tradition of skill, particularly in mechanical engineering, has defied decay in spite of lack of resources and modern equipment. The following institutions now supplement that traditional skill.

Industrial Training Institute, Howrah

The Industrial Training Institute, Howrah, functioning under the Directorate of Industries, West Bengal, imparts training in engineering and non-engineering vocational trades. The number of persons qualifying here during the 3-year period from 1961-62 to 1963-64 was as follows.

Type of training	No. of persons trained		
	1961-62	1962-63	1963-64
Engineering trade	351	239	160
Non-engineering trade	27	56	54
Part-time training for industrial workers	61	172	—

Central Training Institute

Sponsored by the I.L.O. for the training of instructors, the Central Training Institute was set up by the Government of India at Dassnagar, Howrah in 1961 with a capacity to teach 464 craftsmen instructors per year. It offers the following training courses: (1) Theoretical and practical instructions in various engineering trades and in the art of teaching those trades, imparted to instructors required for the existing training institutions. (2) Refresher courses for trained instructors to keep them abreast of improved technique and latest methods of teaching their trades. (3) Vocational training in engineering trades including compulsory training in factories for 6 months for new entrants to the attached practice training institute.

The number of persons trained by this institution over the 3-year period from 1962-63 to 1964-65 is shown in the following table.

Courses	1962-63	1963-64	1964-65
Craftsman Training Course (18 months)	227	191	554
Instructor Training Course (9 months)	520	366	738

Development institutes

The Indo-Japanese Prototype Production & Training Centre of the National Small Industries Corporation, a Government of India undertaking, was set up with the assistance of the Government of Japan with the following objectives: (1) to undertake development of

prototypes of machines, tools and accessories for making them available to small industrial units for copying and production on commerical basis, (2) to supply to small engineering units designs, drawings, patterns, jigs, fixtures, tools etc. together with processing instruments to enable them to produce machines and tools of standard quality, (3) to develop special purpose machinery to help the small units to improve their production technique, and (4) to impart theoretical and practical training, mainly to skilled workers, supervisors and engineers in small units as also to technical staff of the Central and State Governments.

Since 1963-64 the organization has trained 255 technicians of various categories and has developed and manufactured PVC extruders and wire-coating machines, hydraulic pressure diecasting machines, power presses and electrical measuring instruments.

National Metallurgical Laboratory

The regional foundry station of the National Metallurgical Laboratory located at the Industrial Estate at Dassnagar, Howrah, provides testing facilities to foundry units and technical guidance to personnel engaged in them.

Central Engineering Organization

The Central Engineering Organization at Dassnagar under the Directorate of Industries, West Bengal has a machine shop, tool-room and testing facilities with a commercial and technical wing offering the following services to small-scale units in Howrah and Hooghly districts, 95 of which were its members in 1965: (1) to develop small units as ancillaries to big industries, (2) to provide marketing facilities to member units by way of securing orders for them from major buyers, (3) to provide tool-room and testing facilities, (4) to supply requisite drawings, designs, jigs and fixtures etc., (5) to distribute ferrous and non-ferrous raw materials of required quantity and standard, and (6) to supervise the production of member units to ensure quality.

Graduate & Post-Graduate technological institutions

The Bengal Engineering College at Sibpur, Howrah, one of the oldest of its kind in India, provides the following courses of study leading to the Bachelor's Degree in engineering of the Calcutta University: (*i*) Civil, (*ii*) Mechanical, (*iii*) Electrical, (*iv*) Metallurgical, (*v*) Mining, (*vi*) Tele-communication, and (*vii*) Architectural engineering. The college also offers Post-Graduate courses for the Master's Degree in Civil, Mechanical, Electrical and Metallurgical Engineering and a Post-Graduate Diploma Course in Town and Regional Planning. In addition, it provides Post-Graduate research facilities to graduates in engineering. The annual admission capacity is 400 for the Graduate and 120 for the Post-Graduate courses and 30 for research studies.

To sum up, the training institutions of Howrah thus send out a steady flow of trained personnel at all levels making non-availability of skilled workers hardly a problem with industries of Howrah although there is a general shortage of some categories of highly skilled craftsmen and technicians.

Labour & Employers' Organizations

The particulars of trade unions in the district, numbering 172 in 1965, have been given in Appendix C to Chapter VI.

Employers' associations are rather rare in the district owing to the fact that most of the big or even medium-sized industrial concerns have their head offices in Calcutta and are thus affiliated to some Chamber of Commerce or the other. The only two registered employers' organizations which do not have such affiliations are the Kadamtala Bazar Byabasayee Samiti of Narasinha Dutta Road, Kadamtala, Howrah having a membership of 87 and the North Howrah Shopkeepers' and Hawkers' Association of 5, Hazarimal Shah Road, Salkia, Howrah with a membership of 76. Another employers' organization, the Howrah Manufacturers' Association of 198 Belilios Road, Howrah, is an unregistered body.

Welfare of Industrial Labour

Recent labour legislations have enabled the employees to discuss the points of discord with the management and reach bipartite agreements, if possible, failing which the disputes are referred to appropriate officers of the Labour Directorate for settlement. The following statement gives the particulars of industrial disputes in Howrah district for the period from 1962 to 1966.[1]

IMPORTANT INDUSTRIAL DISPUTES IN HOWRAH DISTRICT: 1962-66

	1962	1963	1964	1965	1966
No. of disputes	48	42	24	40	22
No. conciliated	26	30	17	33	21
No. referred to adjudication	1	1	nil	1	nil
No. otherwise disposed of	21	10	7	6	1
No. of concerns affected	45	42	24	38	22
Workmen involved	10,814	22,680	8,309	12,391	22,640
Man-days lost	2,08,025	1,50,486	1,05,802	1,47,518	3,84,127

In 1966 four Labour Welfare Centres were functioning in the district at Bauria, Belur, Howrah and Lilua with dispensaries attached to the Lilua and Howrah centres. There was also a Model Labour Welfare Centre at Belur. In June 1967, a new Labour Welfare Centre was opened at the Indian Botanic Garden, Sibpur. These centres provide facilities for education, recreation, physical culture and craft training and also medical aid free of charge to industrial workers and are mostly situated near the labour lines.

The Employees' State Insurance Scheme is operative in the district. It covers employment injury risks and offers free medical aid and

[1] Source: Labour Commissioner, West Bengal.

maternity benefits to industrial employees. Till 1st January 1967 the scheme covered 1,98,000 workers and their dependents. Formerly, the family members of insured persons were entitled only to limited benefits. But since October 1963, free maternity service to the wives of the insured by medical practitioners and specialists attached to the scheme and diagnostic facilities and free supply of costly medicines prescribed by such doctors are being made available. In 1966 three Employees' State Insurance hospitals were functioning in the district at Baly, Uluberia and Baltikuri. Besides, arrangements exist for the treatment of infectious diseases at the Satya Bala Infectious Diseases Hospital at Howrah and the Subdivisional Hospital, Uluberia.

Minimum Wages Act

An Inspector, with his headquarters at the New Secretariat Buildings, Calcutta, looks after the enforcement of the provisions of the Minimum Wages Act in the district. In 1966 the number of prosecutions launched by him under the said Act was three while there were no claim cases. Up to August 1967, similar prosecutions numbered eight, there being no claim cases. The two Assistant Labour Commissioners posted at Howrah are empowered to deal with cases both under the Industrial Disputes Act and the Minimum Wages Act.

APPENDIX

Howrah : Industrial Evolution & Landscape*

By

Amiya Bhusan Chatterjee

The nucleation of modern manufacturing industries in India started mainly due to the efforts of Europeans. Sugar, indigo, salt-petre, muslin etc. were the products of cottage industries.

In 1790 Howrah, like most of the villages in India, was a self-contained unit[1] with priests, doctors, domestics, confectioners, milk-men, fishermen, iron, gold and copper-smiths, oilmen, merchant communities etc.[2] The surplus products of the different villages used to be collected at certain markets for sale and export.[3] Betor in the south and Ghusuri in the north, inside the present city of Howrah, were such important markets before the end of the 15th century.[4]

In this part of the monotonously flat and rich alluvial region of Bengal, trade in rice, cotton, sugar in addition to silk, tobacco, indigo, oil, pearls, muslins, copper, "aromatic spikenards" etc. were known from the early Christian era.[5] Radhanagar on the Howrah side, towards the end of the 17th century, was famous for cotton cloths, handkerchiefs and the best sugar produced in Bengal.[6]

Numerous country boats used to ply[7] and perhaps were the only means of transport in this riparian tract.[8] An abundance of forests in this part of Bengal used to supply the needs of the boat-building industries which thrived well in the riverside areas near the Hooghly town in the 17th century.[9] The riverside above Howrah had been famous from the 14th century for the overseas trade.[10] Before 1586,

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* Based on the study made by the writer in an article on Howrah, which appeared in the Geographical Review of India. Vol. XXV. No. 4. December 1963. Some of the original paragraphs are retained here. The latest data, given in this article, have been received from the State Editor, West Bengal District Gazetteers.

[1] D. H. Buchanan—The Development of Capitalistic Enterprises in India. New York, 1934. p. 1.

[2] A. Kyd—MSS. En.f. 95, No. 604, India Office Library, p. 65.

[3] ibid.

[4] A. K. Roy—Census of India, 1901. p. 8.

[5] P. C. Bagchi—Calcutta and Suburbs. Calcutta, 1935. p. 200; W. W. Hunter—Imperial Gazetteer of India, Provincial Series, Vol. I. Calcutta, 1901. p. 317; T. Bowrey—A Geographical Account of Countries Round Bay of Bengal, 1669 to 1679. Cambridge, MDCCCCV, p. 132; W. Hamilton—Geographical, Statistical and Historical Description etc. London, 1820. p. 28.

[6] Capt. A. Hamilton—A New Account of the East Indies. London, 1744. p. 6.

[7] A. Mitra—District Census Handbooks: Howrah. Census 1951. p. x.

[8] G. Toynbee—A Sketch of the Administration of the Hooghly District etc. Calcutta, 1888 p. 105.

[9] R. K. Mukherjee—The Changing Face of Bengal. Calcutta, 1938. p. 179.

[10] W. W. Hunter—A Statistical Account etc. p. 225.

Betor was well known as the place of anchorage of large seagoing vessels, particularly of the Portuguese, furthest up the river.[1] The deeper channel of the river was on the Betor side and the Sibpur sand bank, now a part of the mainland, was not formed at that time.[2] Such was the background before the East India Company consolidated their position in this part of the country towards the middle of the 18th century.

Modern industries, then, started taking their roots only to meet the immediate and essential needs of Europeans who came to India for trade and commerce and the Howrah city was considered to be the "workshop" of Calcutta at that time. Europeans, naturally, were not interested in the development of industries or the exploration of the resources of the country for the benefit of the Indians.[3] Thus the ship-building and repairing industry was one of the earliest to take its root before the beginning of the 18th century as European merchant ships needed repairs after their long voyages. The repairing of ships had been mentioned towards the beginning of the 18th century. The ocean-going vessels needed ropes and a ropeworks of the Stalkarts started in Salkia before the last quarter of the 18th century. The European sailors needed strong drinks and some rum distilleries started working before the end of the 18th century in Howrah, Ramkrishnapur, Sibpur and Shalimar. Sugar was one of the pioneer industries in Howrah as sugar was needed for the distilleries. Indigo factories started growing as European manufacturers found them highly profitable. Canvas and paper factories started in 1811 at Sibpur to supply these manufactured products in the Java area where a war had been going on at that time. Hemp and jute were needed in Europe and the screws for packing these two important commercial fibres started in the present city area towards the end of the 18th century. Iron foundries and engineering works were attracted by the ship-building and repairing, textile and other pioneer industries: Europeans earned fortunes from these industries at their initial stages.

The location of the city opposite Calcutta and the existence of a hinterland rich both in men and raw materials, no doubt, led to the subsequent consolidation and extension of the industries Its position in relation to Calcutta may be compared to those of Birkenhead and Liverpool or Southwarks and London at their early stages of growth.[4] Howrah, besides possessing the headquarters of the district and being the second biggest town in West Bengal, is one of the most important

[1] A. Mitra—op. cit. p. 9.

[2] J. R. Martin—Notes on the Medical Topography of Calcutta, 1837. p. 37; The Calcutta Review, Vol. 4, July-Dec., 1845. Calcutta, 1848. p 478.

[3] The Calcutta Review—, op. cit. p. 479.

[4] E. Jones—"Belfast, A Survey of the City," British Association Hand-book Belfast, 1952. p. 205. Similar locations of Ballymacarett and Belfast are also described.

industrial cities in India. With the exception of Calcutta it is the biggest among the towns of the Lower Hooghly Industrial Region.

Origin, growth and distribution

SHIP-BUILDING AND SHIP-REPAIRING INDUSTRY: The flat mud-banks on the Howrah side were found suitable by early European traders to build mud docks to careen and repair their vessels after long sea-voyages. The anchorage at Betor was perhaps the chief factor in the location of these docks on the Howrah side. At about 1706 observations were made about these docks in connexion with the "repairing and fitting of ships' bottoms."[1] They seem to be the earliest of the modern industries introduced by Europeans. A dock existed in Salkia in 1796 and a frigate named Orpheus was brought in for repairs in the dockyard of a Mr. Bacon.[2]

The building of docks between 1781 and 1801 on the Hooghly bank in Calcutta, Howrah, Titagarh and Fort Gloster for building ships followed from the famine in South India which "roused the Government to a sense of importance of the shipping interest" to carry food there.[3] The well-known docks of James Mackenzie in Golabari[4] in Salkia seem to have their origin due to this impetus. The location of the old dockyards in Salkia seems to be due to the existence of the mud-banks besides the deep channel of the river[5] at that time which allowed the bigger ships to reach the Howrah side easily. The shifting of the deep channel, incidentally, is a recurring feature of the river and Job Charnock's selection of Calcutta's site on the other bank was due to the existence of this deeper channel on the Calcutta side.

A teak plantation was started at that time in the northern part of the present Botanic Gardens to supply timbers for ship-building, but the enterprise proved a failure as it failed to supply useful timber even within 50 years.[6]

The first steam-vessel started operating in the Hooghly from 1823, the year in which the Strand Road in Calcutta was constructed and which compelled the ship-builders of that area to remove their docks to Howrah and Salkia on the opposite side of Calcutta.[7] In 1825, as a result, the entire river-side from near the Golabari Ghat[8] in the north to the former Howrah Ghat in the south, except the part occupied

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[1] Capt. A. Hamilton—op. cit. p. 12; A. Mitra—op. cit. p. x; The Calcutta Review, Vol. 18, July-Dec., 1852. p. 308.

[2] The Calcutta Review. Vol. 4, July-Dec. 1845. p. 482; G. Toynbee—op. cit. p. 95; W. H. Carey—The Good Old Days of Honourable John Company, Vol. II. Simla, 1882. p. 184.

[3] The Calcutta Review, Vol. 18—op. cit. pp. 281-2.

[4] C. N. Banerjei—An Account of Howrah, Past and Present. Calcutta, 1872. p. 73.

[5] L. S. S. O'Malley and M. Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 105.

[6] The Calcutta Review, Vol. 4.—op. cit. p. 477.

[7] W. H. Carey—A Missionary Tour in the Hooghly and Howrah Districts. Calcutta, 1888. pp. 57, 107 & 108.

[8] The landing stages or steps in the Golabari area is known as the Golabari Ghat.

by the salt warehouses, was occupied by dockyards of which Brightman and Vrignon's and Mackenzie's dockyards were prominent.[1] Bishop R. Heber referred to Howrah as "chiefly inhabited by shipbuilders" at that time.[2]

The importance of Howrah as a business centre increased rapidly.[3] The river channel near the Howrah Ghat was narrow and constricted and the dockyards stretched along this portion opposite to the main business, commercial and administrative districts of Calcutta.[4] In 1837 there were seven or eight docks on the Howrah side of which one was a "slip dock" built "lately"[5] indicating the further advance made in this industry. Towards the middle of the 19th century though Howrah possessed "extensive manufactories" its prosperity depended mainly on its dockyards and ship-building establishments[6] among which that of one Mr. Reeves was big enough to accommodate "magnificent steamers" making their voyages from the United Kingdom.[7] During this period at least two Indians, Mr. T. N. Paramanik and Mr. K. Sarkar joined the industry[8] and had their own docks in Salkia.[9] The well-known Hooghly Dockyards were started in 1842 by an Indian Mr. J. Mullick with a Mr. Reid in Salkia and the Albion Dock by another Indian Mr. P. Mukherjee with some Europeans in partnership.[10] Before the beginning of the last quarter of the 19th century the dockyards of Salkia extended further to the Ghusuri area and there were about eight large docks in between Howrah and Ghusuri besides some other smaller docks.[11] The year 1870 saw the transfer of the river bank extending from Shalimar to Burn & Co.'s wharf in Ramkrishnapur to the Port Commissioners who immediately improved the area and constructed "Inland Vessels Wharves".[12] The subsequent construction of dockyards near the former Chandmari Ghat, north of the Howrah Bridge, by the Port Commissioners[13] and the extension of the dockyards in Sibpur and Ramkrishnapur in the south for the first time belongs to this period The extension of the dockyards in the southern parts was, perhaps, influenced by the formation of a large sand bank formerly called the Sibpur Island and the reclamation of similar lands

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[1] Schalch's map of Calcutta. 1825.

[2] R. Heber--Narrative of Journey Through the Upper Provinces of India. London, 1828 p. 26.

[3] G. Toynbee—op. cit. p. 95

[4] Tassin's map of Calcutta, 1832.

[5] J. R. Martin—op. cit. p. 39.

[6] E. Jones—The Delimitation of Some Urban Landscape Features in Belfast (reprint). The Scottish Geographical Magazine, Vol. 74, No. 3, 1958, p. 158 depicts a similar picture of Belfast and Ballymacarett.

[7] The Calcutta Review, Vol. 4—op. cit. p. 482.

[8] C. N. Banerjei—op. cit. p. 73.

[9] Maps of Calcutta by (1) New Bengal Directory, 1894, (2) S. Misser—Survey of India, 1856, and (3) R. C. Le Place & Co., 1859.

[10] C. N. Banerjei—op. cit. p. 75.

[11] Ibid. pp. 75-76, mentions ten docks.

[12] A. K. Roy—op. cit. pp. 123 & 124.

[13] Ibid. p. 124.

below the Howrah Ghat where later on two big foundries of Burn & Co. and John King & Co. carried on similar works.

The number of big dockyards decreased towards the beginning of the 20th century and in 1908 only four dockyards including that of the Port Commissioners' employing altogether 1,534 men were to be found in Howrah, Golabari and Salkia. The reason for the reduction in the number was, perhaps, that the foundries of the big companies like the Burn & Co. and John King & Co. near the Telkalghat, the Jessoph & Co. Ltd. at Howrah Bridge Road and the Turner Morrison & Co. at Sibpur turned their attentions to do "a large amount of dock work."[1] In 1925 the industry extended from the riverside of Salkia to Sibpur and it included ten big concerns.[2] It is one of the most important industries today. In 1953 the city possessed twelve of the fourteen registered workshops in the entire Howrah district besides some smaller docks. Among all the districts in different provinces of India, Howrah in 1953 possessed the largest number of dockyards with 3,583 daily workers employed in the industry.[3] In 1965 the district possessed fourteen factories with 3,397 workers of which eleven factories with 2,049 workers were in the city.

The industry now stretches along the river bank from Baly in the north to Nazirgunge in the south. The majority of the dockyards are concentrated in Central Salkia where the industry first took its root. The Hooghly Docking & Engineering Co. is one of the biggest of its kind in India with 1,154 daily workers in 1953.[4] It builds tugs, small oil-tankers, steam, motor or diesel launches besides barges, boats and "dinghies" (a kind of small local boats). Besides these some of the workshops build flats and pontoons. Repairing works are undertaken by all. The Port Engineering Works at Nazirgunge was the biggest of them all in 1965 with 1,019 workers.

ROPE, TWINE AND CORDAGE WORKS: Like the dockyards ropes were essential to the European seamen and indigenous raw materials were available in plenty in this part of the country. Flax was mentioned as an agricultural product of the Howrah area in 1790 by Kyd.[5] The existence of screws for packing hemp and jute for export to Great Britain in 1796[6] indicates that the latter were extensively cultivated in this region. The existence of a ropery in Ghusuri in Mark Wood's map of 1782-83 and a mention of its earlier origin due to the Stalkarts before the beginning of the last quarter of the 18th

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 107.
[2] Large Industrial Establishments in India, 1925. Department of Commercial Intelligence and Statistics, Government of India, 1927. p. 18.
[3] Large Industrial Establishments etc., 1953—op. cit. p. 373. Data and information are collected from other pages too.
[4] ibid. p. 373.
[5] A. Kyd—op. cit. p. 1.
[6] G. Toynbee—op. cit. p. 92.

century[1] shows that the roperies, like the dockyards, are one of the oldest industries of Howrah. From Upjohn's map of 1792-93, a ropery seems to have existed near the new road from the Howrah Bridge while O'Malley quotes the existence of another in Ghusuri in 1801. The rope-making industry extended its activities to the Sibpur area in 1815 when the Ahmuty & Co. started their ropery in Shalimar.[2] The roperies in Howrah proper must have been liquidated or removed, its place being taken by a dockyard before 1825; the other two were big enough in 1908 to employ 434 and 174 workers respectively. Another big ropery (the Ganges Rope Works) started working in Ramkrishnapur and it employed 205 workers in 1908.[3] In 1925, with another factory started in Sibpur near Shalimar, all the important roperies in India except a minor one in Rawalpindi (now in Pakistan) were in Howrah employing a total of 1,083 workers.[4]

All the roperies, except the smallest; extended in 1957 along the industrial zone bordering the river In 1965 the district possessed nine roperies with 2,209 workers of which seven with 2,128 workers were inside the city. The Ganges Ropeworks with 766 workers and the Shalimar Rope Works with 701 workers were the biggest. The centrifugal trend in the distribution can be inferred from the locations of two recently established factories away from the river bank.

THE COTTON TEXTILE INDUSTRY: A cotton-screw for packing and screwing cotton, which used to grow in abundance in this region, was known to have existed in Salkia in 1797.[5] In 1817 or 1820, the Bauria Cotton Mill, stated to be the first cotton mill in India, started at Bauria,[6] a town situated about 15 miles downstream from Howrah. In 1825, cotton screws extended from Salkia to Ramkrishnapur sharing most of the riverside industrial landscape with the dockyards. One such screw became well known in Salkia and the "ghat" there was known as the Cotton Screw Ghat.[7] Before the end of the first half of the 19th century, the number of cotton-screws, as found from different maps, seems to have decreased considerably. But from the middle of the century other cotton-screws and mills were erected in Ghusuri and in Santragachi in the western fringe of the city after it was made the terminus of the railways[8]—this means of transport at that time was considered to be "a great national, military and political object" and was more important according to the Chairman

[1] C. N. Banerjei—op. cit. p. 84.
[2] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 108.
[3] loc. cit.
[4] Large Industrial Establishments etc. 1925—op. cit. p. 118 and other pages too.
[5] G. Toynbee—op. cit. p. 92.
[6] D. H. Buchanan—op. cit. p. 128; A. Mitra—op. cit. p. xxxix.
[7] Schalch's map of 1825 shows the ghat.
[8] A Mitra—op. cit. p. xxxix; C. N. Banerjei—op. cit. reports the existence of a cotton mill before 1845 in Ghusuri.

of the East India Company in bringing cotton from Central India.[1] Mirzapure in Uttar Pradesh was the "entrepot" on the Ganges to which cotton used to be brought by oxen and sent to Calcutta by boats.[2] In 1862, there was a cotton-screw in Sibpur of C. Fieldman & Co. while in 1872 there were two such screws in Ramkrishnapur and one in Santragachi.[3]

Besides one cotton mill near the city boundary in Ghusuri there were three cotton mills in North Salkia in 1908 employing 3,110 workers of which the Ghusuri Cotton Mill employed 2,495.[4] In 1925, there were four cotton ginning and baling mills employing 83 workers and three cotton mills for spinning and weaving, all in the Salkia-Ghusuri area employing 1,626 persons.[5] The city possessed six cotton-ginning and baling mills in 1953: of these four were in Salkia-Ghusuri and two in the eastern part of the Bamangachhi area employing altogether 118 people. Together with the ginning and baling mills in the Salkia-Ghusuri area outside the city the district possessed eight of the ten mills of their kind in the whole of West Bengal. Besides a spinning and weaving mill outside the Ghusuri border of the city, Howrah had three such mills, the two largest were located in North Salkia.[6] In 1965 there were 9 cotton-ginning and baling factories with 175 workers in the district of which 8 factories with 132 workers were inside the Howrah city. These 9 factories together with 2 other factories (presses), with 54 workers in the city, for using cotton and other wastes, constituted 11 factories with 229 workers in the district. Besides these 11 presses, there were, within the district, 42 cotton mills with 11,186 workers in 1965 of which 6 mills with 99 workers were located inside the municipal area of the Howrah city.

THE JUTE INDUSTRY: The Ghusuri area possessed the earliest factory (1796) in the city to screw jute for export to Great Britain.[7] The trade in jute assumed considerable proportions for "making Bengal paper and canvas" in the United Kingdom and the price became very high towards the beginning of the 19th century.[8] Perhaps the cotton-screws, subsequently, served the purpose of screwing and baling jute for there were no references to jute before 1856. This is corroborated by the fact that in the map of the New Bengal Directory of 1854, the present site occupied by the railway engineering workshop facing the Improvement Trust building was occupied by the Colvin & Co.'s cotton-screws, whereas the Survey of India's map by S. Misser of 1856 shows the presence of jute-screws in the same building.

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[1] An Old Indian Postmaster—Indian Railways and Their Probable Results. London, 1848. p. XLXff.
[2] ibid. p. 30.
[3] C. N. Banerjei—op. cit. p. 85.
[4] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 111.
[5] Large Industrial Establishments etc. 1925—op. cit. pp. 1 & 79.
[6] Large Industrial Establishments etc. 1953—op. cit. pp. 22 & 175.
[7] G. Toynbee—op. cit. p. 92.
[8] loc. cit.

During this period screws for pressing jute were set up at Cullen Place and at Dobson Road and Rosemary Lane crossing in Howrah and another at Sibpur.[1] About 1860, the existence of a number of jute presses in the Golabari area was known.[2] The jute mills started operating from the beginning of the last quarter of the 19th century; the earliest were the Sibpur Jute Mill (old) in Sibpur and the Howrah Jute Mill in Ramkrishnapur established in 1874.[3]

Location of the jute industry, so far away from the main jute-growing areas of East Pakistan, was due to the nearness of the market in Calcutta, availability of labour supply, little saving of freight charges if manufacturing was done in East Pakistan and then sent to Calcutta, availability of coal, mill stores and machinery[4] and the existence of a number of engineering firms in Howrah to repair and replace machinery quickly.

In 1908, there were seven jute presses, all in the Salkia-Ghusuri area except one in Central Howrah with a total of 2,148 workers and five jute mills, all in the Sibpur-Ramkrishnapur area except one in Ghusuri with a total of 21,408 workers.[5] The jute industry became the biggest in Howrah from that time. In 1925, there were eight jute presses, all in the northern part of Salkia and Ghusuri and the same number of jute mills. The number of workers employed were 2,277 and 36,335 respectively. The three comparatively new jute mills were all located in the Sibpur area.[6] Jute was the biggest industry in Howrah in 1953 with only four jute presses, all in Salkia employing 131 workers and fourteen jute mills mostly in the Sibpur-Ramkrishnapur and Ghusuri areas with more than 24,867 workers in 1953.[7] With improvement in road transport the jute mills inside the city too found locations other than the riverside. Thus, in the Dharamtala Road area in East Bamangachhi there were two mills; the Kadamtala area in Bantra and Chandmari area in the central part had one each.

In all the mills, except the three engaged only in weaving, both spinning and weaving is done. In 1957, 7,408 looms and 1,10,486 spindles worked in all these mills. Hessians, sackings, webbings, twines and canvas are the usual products. In the Hanuman Jute Mill in Ghusuri jute-carpets, wool-yarn and wool-carpets are also produced.[8] In 1965 there were three jute presses with 61 workers, all inside the city area, and twenty jute mills with 66,152 workers in the

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[1] L. S. S. O'Malley and M. Chakravarti—, loc. cit.; C. N. Banerjei—loc. cit.

[2] A. Mitra—op. cit. p. XXXIX.

[3] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 112.

[4] G. N. Gupta—A Survey of the Industries and Resources of Eastern Bengal and Assam for 1907-08. Shillong, 1908. p. 63.

[5] L. S. S. O'Malley and M. Chakravarti—loc. cit.

[6] Large Industrial Establishments etc. 1925—op. cit. pp. 5 & 116.

[7] Large Industrial Establishments etc. 1953—op. cit. pp. 29 & 178.

[8] Figures obtained from India & Pakistan, Wool, Hosiery etc. 1957, John Worrall Ltd., Oldham, England. p. 152.

Howrah district including the city area. The majority of the jute mills and workers were outside the Howrah city, which possessed only eight mills with 19,579 workers in 1965.

FLOUR MILLS: The first flour mill was located in the central part of Howrah, attached to the jute-screw already referred to in the map of the Survey of India of 1856. This mill was known before 1849 as the Phoenix Steam Flour Mill belonging to Jessop & Co. It was removed to Sibpur due to the taking over of the place by the railways. In 1859, there was another flour mill of one Mr. Atkinson in Sibpur.[1] Another mill seems to have been established in the same decade in a part of the Albion factory of W. Jones in Sibpur.[2] Its existence was known before 1876.[3]

In 1908 there were four flour mills, all in the Sibpur-Ramkrishnapur area employing 571 persons.[4] Two more flour mills were established later on in Haraganj before 1910.[5] In 1953 four big flour mills, all in the Sibpur-Ramksrishnapur area, employed about 700 workers.[6] Besides these there was a number of local "Chakkiwallas"[7] with their small concerns in all the market areas of the city. In 1965 there were nine flour mills with 741 workers in the district, the Howrah city possessing eight of them with 723 workers besides the "Chakkiwallas" already mentioned.

OIL MILLS: The mustard oil mill of Messrs. Jessop & Co. became so well known after its opening in 1830[8] that the landing steps on the riverside was long known as the Telkalghat.[9] In this decade[10] the castor oil factory on the bank of the river in Ghusuri and another further south in Salkia were also well known. In 1872, an oil mill was started in Santragachhi[11] and by the beginning of the 20th century, besides a large oil mill in Ramkrishnapur employing 59 workers, three other smaller mills had opened in the Salkia area.[12] In 1925, four out of a total of seven oil mills were in the Haraganj-Banaras Road area, the other three were in the Ramkrishnapur-Sibpur locality. The total number of people employed was 384.[13] In 1953 there were eight oil mills, all within the city, located at Haraganj, Bamangachhi, Kadamtala and Khurut including two big mills in Ramkrishnapur of which one used to produce hydrogenated oil. Others mostly pro-

[1] C. N. Banerjei—op. cit. p. 81.
[2] A. Mitra—op. cit. p. XL.
[3] W. W. Hunter—op. cit. p. 295.
[4] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 113.
[5] J. G. Bartholomew—Thacker's Reduced Survey Map of India, 1910.
[6] Large Industrial Establishments etc., 1925—op. cit. p. 24; and—, 1953—op. cit. p. 46.
[7] Chakkiwallas are shopkeepers having small grinding wheels or machines for grinding wheat, pulses etc.
[8] A. Mitra—loc. cit.; C. N. Banerjei—op. cit. p. 85.
[9] Telkalghat means landing steps of an oil mill.
[10] From maps of the New Bengal Directory in 1854, R.C. Le Page & Co.'s map of 1856 and Survey of India's map by S. Misser, 1856.
[11] C. N. Banerjei—loc. cit.
[12] L. S. S. O'Malley and M. Chakravarti—loc. cit.
[13] Large Industrial Establishments etc. 1925—op. cit. p. 61.

duced mustard oil. The total number of workers employed was 496.[1] In 1965, there were eleven oil mills with 246 workers in the district of which eight with 146 workers were within the city. There was only one hydrogenated oil factory with 119 workers located outside the Howrah city. Besides these there were three more factories with 316 workers producing vegetable and animal oils and fats, which were inedible; of these two with 67 workers were inside the city.

SAW MILLS, WOODWORKS ETC.: Associated with the ship-building industry were the saw mills of which the first was a steam-saw factory of one Captain Stewart in the Bataitala riverside area.[2] This seems to be one of the pioneer factories started at the beginning of the 19th century for introducing steam-propelled machinery in India. Its site was later occupied by the Albion Mill of W. Jones before 1811. "A large wood manufactory near Sibpur" was mentioned in 1872[3] which indicates that the saw mills were confined to the southern part of the city till then. The location of a large timber yard in Ghusuri was known before 1861.[4] The existence of a saw mill in Salkia, besides a large timber yard and another saw mill in Sibpur, was known in 1908.[5] In 1953 Howrah possessed seven timber firms with 286 employees[6] of which the five largest were in the southern part of the city, besides a few smaller ones, some of which were in the interior of the city. In 1965 there were eighteen factories one of which had to be closed down. Of the seventeen factories with 834 workers, sixteen with 799 workers were inside the Howrah city. The factories consisted of saw mills, manufacturing units of plywood, general woodworks, wooden boxes etc.

METAL INDUSTRIES: The ship-building and textile industries attracted foundries and engineering works to the city. Albion Mill, erected by W Jones (Guru Jones[7]) before 1811 in Sibpur, seems to be the earliest iron works in Howrah.[8] Before Messrs. Burn & Co. erected their well-known iron works at the Telkalghat area in 1896, one Mr. John Craig started there a small iron-casting workshop which he himself used to operate. The flourishing state of the iron works can be imagined from the fact that within a few years Craig's brother left nearly 1,00,000 rupees to his widow after he started a similar workshop in the same area. Within a decade a number of foundries, cast-iron works and engineering firms sprang up at Telkalghat and its vicinity. The local people did not lag behind and the first Indian to engage himself in this industry was one Iswar Chandra Majhi who began producing iron-castings near the Howrah Ghat in 1857

[1] ibid. 1953. pp. 110 & 116.
[2] From Schalch's map of 1825 and Tassin's map of 1832.
[3] C. N. Banerjei—loc. cit.
[4] From Survey of India's map of 1861.
[5] L. S. S. O'Malley and M. Chakravarti—loc. cit.
[6] Compiled from Large Industrial Establishments etc., 1953—op. cit.
[7] Guru means teacher or preceptor.
[8] C. N. Banerjei—op. cit. p. 80.

from where his workshop was shifted to his village at Khurut. The industry spread to the south in Ramkrishnapur and a large engineering yard of Simpson & Co. was set up in 1871 besides an iron foundry started in 1859.[1] The Sibpur and Salkia area, however, possessed a few iron works during the third quarter of the 19th century.[2] The big Carriage and Wagon Workshop of the Eastern Railway at Lilua and the engineering workshop of Messrs. Jessop & Co. in Howrah were mentioned as prominent ones by Mr. Collin in his important report of 1890.[3] At the beginning of the 20th century the industry was small compared to that in the United Kingdom.[4] However, it developed considerably and its conditions and future prospects appeared very hopeful at the time. The importance of Howrah as a site for engineering firms can be gauged from the fact that it possessed by far the largest number of private engineering firms of sufficient magnitude out of a total of nine such in the whole of India at that time. The number of machinery and engineering workshop operatives in Howrah was 4,334 compared to Calcutta with only 1,127. The total number of operatives employed in the iron and steel industry including those in the dock-yards in Howrah was 11,135.[5] In 1908, there were nine large engineering firms, excluding those of the railways and the dock-yards, located in Howrah, Salkia and Sibpur with a total of 7,793 workers of which Burn & Co.'s workshop employed 3,968. The city had three railway workshops in Howrah and Sibpur with 714 operatives excluding the big Carriage and Wagon Workshop of the railways with 5,097 workers.[6] In 1925, the total number of registered engineering firms in the city excluding the railway workshops totalled thirty-seven with 5,474 workers. They were located mostly in Salkia, Bantra, Bamangachhi and Sibpur; a few having penetrated to the Andul Road and Santragachhi areas. There were, in addition, six railway workshops with 13,122 operatives including 11,525 of the big Lilua workshop and of the other workshops in Howrah, Sibpur and Bantra.[7]

Iron and steel works in Howrah now form one of the most important industries of the place. It spread to most parts of the city except some good residential localities and the south-west providing a contrast to the distribution of other industries. It includes metal rolling, tube making, wire drawing, metal founding, extracting and refining, manufacture of metal containers, steel trunks, safes and

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[1] ibid. pp. 81 & 82.
[2] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 108.
[3] E. W. Collin—Report on the Existing Arts and Industries in Bengal. Calcutta, 1890. p. 2.
[4] E. R. Watson—A Monograph on Iron and Steel Work in the Province of Bengal. Calcutta, 1907. p. 16.
[5] ibid. pp. 11 & 45.
[6] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 109 & 110.
[7] Large Industrial Establishments etc., 1925—op. cit. Data compiled from different pages.

vaults, bolts, nuts, springs, chains, hooks, agricultural implements, hurricane lanterns, mathematical instruments, wood-working, textile and other machinery, general jobbing and engineering besides the tramway, municipal, Bengal Engineering College and railway workshops. There are very large factories with more than several thousand employees and very small ones whose machinery are operated by the owner himself. The bigger workshops, employing over 500 men, are spread in an arc along the eastern fringe of the city.

The industry is more concentrated in the northern part of the city to the north of the Netaji Subhas Road. This area is subdivided into three by the Eastern and South Eastern Railway lines. To the east of the Eastern Railway lines the industry has developed on both sides of the Grand Trunk Road. Marked concentration, however, is to be found in the Banaras Road and Dharamtala Road area in Bamangachhi and in the Guha Road area in Malipanchghara. The Dharamtala-Grand Trunk Road area is marked for workshops engaged in manufacturing metal containers, steel trunks, buckets etc. The north-eastern segment of the city, between the Eastern and South Eastern Railway lines accommodates the metal founding works which abound in the Banaras Road area in North Bantra. The third and the most important zone, so far as small-scale iron industries are concerned, is located in between the South Eastern Railway lines and the Netaji Subhas Road in the north-central part of the city. The Belilios Road is conspicuous for a heavy concentration of these industries which deal with the general engineering and jobbing, metal-founding and manufacture of agricultural implements, bolts, nuts, springs, chains etc.

The origin of these small-scale industries can be traced back to more than a century when in the middle of the 19th century one John Craig and later his brother started casting works themselves in the Telkalghat area. The later encroachment to the Belilios Road by these units began about a hundred years ago[1] when three local Bengalis, Ishan Chandra Kundu, Fakir Chandra Mistry and Ramchandra Banerjee established their foundries in their own lands. They started manufacturing cane-crushers which were in demand. Subsequently, with the development of the jute industry and the demand for mustard oil they started manufacturing jute-baling and oil-seed presses. They did not possess good machinery but somehow managed to do the casting and turning, the products being rather crude. One local man, Jogen Chatterjee, started casting frying pans in his factory and, subsequently, similar units were set up by others like Kanai Panja, Haradhan Mondal and Panchu Bhaduri in the Belilios Road area. These formed the nucleus of the industry. In 1890, these industries were considered "insignificant" because simple

[1] Information compiled from field enquiry.

implements like spades, ploughshares, axes, nails etc., used to be imported.[1] These workshops seldom used to get good contracts as all the machinery, most of which are now produced in Howrah, used to be imported at the beginning of the 20th century.[2] The condition of these industries at that time was described by Hunter[3] in the following words: "In addition to the large iron works mentioned above, 16 small firms managed by native agency purchase pig-iron and scrap-iron in Calcutta, and manufacture weights, sugarcane presses, rollers, bolts, plant for oil and jute mills, building and carriage materials, railings, iron safes &c., the out-turn being valued in 1901 at 1.39 lakhs."[4] Thus, though of crude types, the varieties produced had, by that time, grown in numbers.

During this period some workshops, namely Atta Iron Works, D. N. Singha & Co., R. M. Chatterjee & Co., Thakurdas Sureka, and Dhanj & Co. were established in Salkia. Two of these, the Atta & Co. and Dhanj & Co., started manufacturing oil-seed presses as they possessed oil mills; R. M. Chatterjee & Co. and D. N. Singha & Co. used to manufacture rain-water pipes and fittings; Thakurdas Sureka used to do various types of works.

The impetus received due to the First World War resulted in further concentration of these workshops, particularly, in the Belilios Road area. Several of them turned their attention from foundry work to the manufacture of machinery. They began to purchase old or discarded lathes and other machinery from big concerns like Burn & Co., Port Engineering Works, the Railway Workshop at Lilua etc. They also had an opportunity to buy machinery when the large John King & Co. went into liquidation and Parry & Co. sold some of their own. Of the large number of firms which started operating, Messrs. Aswini Kumar Mondal, D.K. Das & Co., Bhutnath Panchal, S. C. Das & Co., Paul's Engineering, Howrah Engineering, and Ananta Chatterjee & Co. became well known during this period. Like the gun and jewellery quarters of inner Birmingham in the 19th century, a high degree of localization of these firms in the Belilios Road and Narasinha Dutt Road areas also caused a mixture in their functional character.[5] In 1925, besides the bigger firms, the number of registered iron works totalled 39[6] apart from a number of smaller and unregistered ones.

During the Second World War the number of firms increased considerably. Their activities expanded at a rapid pace as they began

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[1] E. W. Collin—op. cit. pp. 3 & 5.
[2] E. R. Watson—op. cit. p. 18.
[3] W. W. Hunter—op. cit. p. 342.
[4] A lakh or lac means 1,00,000.
[5] M. J. Wise—"The Growth of Birmingham", Birmingham and its Regional Setting, British Association for the Advancement of Science, Birmingham, 1950. pp. 214-15.
[6] Large Industrial Establishments etc., 1925—op. cit. compiled from different pages.

to meet large-scale war demands. Some of them started producing lathes, drills, planing, shaping and press machines, which were in demand in the market. A number of small firms, dependant on the prosperity of the bigger ones whose orders they used to receive during the war period,[1] started operating and they grew up very quickly in the Belilios Road, Grand Trunk Road and Narasinha Dutt Road areas. Of them the Imperial Engineering, Lakshmi Engineering, General Traders Syndicate, Ultra Engineering, Dass Brothers, Dhur & Co., Sen & Co., Senapati Brothers, Promoto Das, Indian Weighing Scale and others were started during the war. The smaller factories usually squeezed themselves in the old, dilapidated, dark and ill-ventilated rooms in the residential quaters, while the bigger ones managed to build their factories in the less congested areas of these quarters.

The importance of the small engineering firms in Howrah can be gauged from the fact that in 1957, of the total number of these works more than three-fifths were to be found within a radius of 5 to 6 miles from the centre of Calcutta and within the municipal limits of Howrah. In these small engineering industries the estimated amount of productive capital employed was Rs. 1.26 crores[2] of which, fixed capital accounted for Rs. 45 lakhs and working capital Rs. 61 lakhs.[3] Of about 600 of these small-scale firms employing about half of the total operatives working in the big industries, nearly 400 used electricity. These 400 workshops employed over 10,000 persons, or 25 persons on an average per factory. About 20 per cent of these units were "one-man shows" the proprietors themselves acting as the clerk, accountant, machineman, supervisor and manager.[4]

After the last World War, the condition of the smaller firms became precarious but restriction on import gave them time to stem the tide. They are now doing well though their activities are limited due to the dearth in the supply of iron and steel. Besides, the machinery they still use are old and obsolete; some of these have been ingeniously built by these "small engineers" themselves. The smaller firms have monopolized the manufacture of galvanized water-pipe fittings. Due to the large demand of cast-iron pipes most of these firms are now preparing themselves to produce cast-iron pipes and fittings too. Of the big firms, the Eastern Railway Carriage and Wagon Workshop is now the biggest of its kind in West Bengal with 7,270 workers in 1953 and 7,300 workers in 1965. For general jobbing and engineering, the Howrah Iron Works of Messrs. Burn & Co. in the Nityadhan Mukherjee Road is the biggest of its kind in India. It employed over

[1] A. K. Ghosh—"The Little Engineers of Howrah", The Statesman. Calcutta, 14th June 1957. p. 10.
[2] Ibid.
[3] J. Banerjee—Howrah Civic Companion, Vol 1, 1955. p. 16, quoting the report of S. Ghosh. One crore is 10,000,000.
[4] A. K. Ghosh—op. cit. compiled from the article.

5,000 workers in 1953 and 7,042 in 1965. Messrs. Guest Keen Williams at Andul Road was the biggest concern in India manufacturing bolts, nuts, springs, chains, nails and railway parts. It employed 3,333 workers in 1953 and 6,272 in 1965. The next biggest firm of its kind was located in Bombay employing only 208 persons in 1953. The rapid growth of this big firm can be gauged from the fact that in 1925 it employed only 247 workers.[1]

OTHER INDUSTRIES: Towards the end of the 18th century there was a number of rum distilleries "to supply the Army and Fleet" and an indigo factory in Howrah. The indigo works and a distillery belonging to a Mr. Chapman was in the southern part of Ramkrishnapur. The distillery of Mr. Levette, another of a Chinese near the salt warehouses and three others owned by Indians in Sibpur and Shalimar were the other manufactories at that time.[2] Sugar factories, usually, associated with the rum distilleries, thus, belonged to the pioneer industries in Howrah.[3]

At the beginning of the 19th century, besides the rope, indigo, sugar and rum works chintz and canvas factories, established by Europeans,[4] were to be found on the western bank of the river. A canvas and a paper manufactory of W. Jones, established in Sibpur in 1811[5] to supply the demand created by the war in Java, added to the nuclei of industries formed on the southern part of the city. The old industry, associated with rice, was transferred from the Golabari area in Salkia to the reclaimed sand bank of Ramkrishnapur. It used to provide about 2,000 workers in "boating, cleaning, storing, carting etc."[6] Brick-making kilns were established in the Sibpur riverside at first and a large brick kiln was located there in 1832.[7] Subsequently, Messrs. Burn & Co. started producing bricks and tiles in their factory in Telkalghat.[8] Towards the middle of the 19th century a sugar factory and a rum distillery in Ghusuri and another distillery near the previous one were started.[9] Before the end of the third quarter of the last century a gas works in Central Howrah, a paper mill in Ramkrishnapur, a manufactory for acids in Gholadanga, the chemical laboratory of the Bathgate & Co. to the west of Burn & Co.'s foundry, one "ice house" at Golabari and three printing presses, one in Sibpur and two in Howrah, started operating.[10] At the beginning of the 20th century the salt-crushing mills and a big steam-printing workshop at Salkia, a big paint-work at Shalimar and a number of works for

[1] Large Industrial Establishments etc., 1953—op. cit. compiled from different pages.
[2] A. Kyd—op. cit. p. 72 and the map.
[3] G. Toynbee—op. cit. p. 83, quoting a certificate issued by the Collector.
[4] ibid. p. 95.
[5] The Calcutta Review, Vol. 4—op. cit. pp. 478-9.
[6] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 114.
[7] Tassin's map of Calcutta, 1861.
[8] Survey of India's map of Calcutta of 1861.
[9] C. N. Banerjei—op. cit. p. 84.
[10] ibid. pp. 39, 82, 85; Survey of India's map of 1856 & 1861—op. cit.

grinding bricks in various parts of the town came into existence.[1] The hosiery, aerated water, other chemicals, granite-mica and stone-dressing works started operating in the first quarter of the 20th century in the Salkia and Sibpur areas of the city. The total number of workers employed in all the factories of these types, as registered in 1925, was only 865.[2]

The increase in the number of factories and varieties of manufactories was very rapid during and after the last World War and the city in 1953 possessed the following subsidiary industries with the number of workers employed daily in the registered factories,[3] the other factories in limited numbers were located in the adjoining Belur, Lilua and Dassnagar areas in the Howrah district.

Industries	No. of factories in Howrah city	No. of workers in Howrah city	No. of factories in the district (excluding Howrah city)	No. of workers in the district (excluding Howrah city)
Bakery	3	48	—	—
Food, drink etc.	6	310	—	—
Knitting & Hosiery	8	200	8	229
Umbrella	2	90	1	100
Printing	8	790	1	15
Rubber	2	745	2	149
Paint, colour & varnish	3	234	4	727
Soap	3	149	1	33
Chemicals (only printing ink)	2	113	2	80
Petroleum & coal	4	273	1	85
Glass	6	1,511	2	761
Pottery, China etc.	—	—	2	105
Lime	—	—	1	61
Electric accessories	3	152	—	—
Battery	—	—	1	44
Gas & electric	8	264	2	278
Cloth printing	3	36	2	119
Plastic articles	—	—	7	255
Celluloid articles	—	—	1	34
Others like pen and pencil, *zardā* etc.	4	165	1	26

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 113.
[2] Large Industrial Establishments etc., 1925—op. cit.
[3] Large Industrial Establishments etc., 1953—op. cit. compiled from different pages.

In 1965 the numbers and varieties of the factories in the district, engaged in the manufacturing of subsidiary products, showed considerable increase as will be evident from the following table.

Industries	No. of factories		No. of workers	
	In the district excluding Howrah city	In Howrah city	In the district excluding Howrah city	In Howrah city
Bakery	—	2	—	31
Food, drink etc.	—	5	—	173
Knitting & hosiery	6	4	126	97
Umbrella	2	2	249	27
Printing	2	9	1,813	894
Rubber	8	6	887	837
Paint, colours & varnish	6	3	859	275
Soap	1	4	15	159
Chemicals	10	4	337	251
Petroleum & coal	—	2	—	72
Glass	3	4	1,345	935
Electric wires, fans, accessories, jobbing etc.	8	15	577	1,516
Gas & electric	2	10	257	358
Cloth printing	—	—	—	—
Rice mills	15	—	695	—
Dāl mills	—	22	—	475
Starch	—	1	—	46
Cold storage	—	1	—	16
Zardā	1	—	32	—
Silk	1	—	29	—
Wool	1	—	204	—
Other textiles	4	4	164	127
Wearing apparel	—	1	—	15
Paper, paper pulp, paper and straw board etc.	2	3	173	136
Tanneries & Leather	—	2	—	65
Plastic materials	2	—	188	—
Wrapping, packing etc.	—	3	—	124

(Contd.)

Industries	No. of factories		No. of workers	
	In the district excluding Howrah city	In Howrah city	In the district excluding Howrah city	In Howrah city
Job dyeing, dry cleaning etc.	1	1	14	16
Photography	1	—	50	—
Battery	—	1	—	10
Pottery, china, earthenware	3	1	128	13
Structural clay products	1	—	11	—
Games & sports	---	1	—	48
Plastic articles	6	3	275	119
Celluloid articles	2	—	67	—
Minerals & mineral products	8	4	190	187
Cloth printing	—	—	—	—
Pen & pencil	—	—	—	—
Other manufacturing	2	11	66	2,197
Total	98	129	8,751	9,220

The following table gives an interesting comparison between the major and subsidiary industries in the city in 1953 and 1965. The bakery and food and drink services were inadequate for the town as would be evident from their numbers and workers employed in them.

Major industries	No. of factories (1953)	No. of workers (1953)	No. of factories (1965)	No. of workers (1965)
Ship-building & Ship-repairing	12	2,586	11	2,049
Rope, twine & cordage	5	1,795	7	2,128
Cotton textile including ginning & baling	7	2,212	16	285
Jute textile including ginning & baling	18	25,198	11	19,640
Flour mills	4	696	8	723
Oil mills	8	496	10	213
Saw mills, woodworks etc.	7	286	16	809
Metal industries including smelting, refining, jobbing, repairing etc.	274	22,565	446	41,122
Total	335	55,834	525	66,969

Besides the data given above for the Howrah city, *the district, excluding the city,* had the following number of factories and workers in 1953 and 1965.

Industries	No. of factories (1953)	No. of workers (1953)	No. of factories (1965)	No. of workers (1965)
Ship-building & Ship-repairing	2	997	3	1,348
Rope, twine & cordage	—	—	2	81
Cotton textile including ginning & baling	12	6,440	37	11,130
Jute textile including ginning & baling	12	36,435	12	46,573
Flour mills	—	—	1	18
Oil mills	1	34	3	468
Saw mills, woodworks etc.	—	--	3	53
Metal industries including smelting, refining, jobbing, repairing etc.	68	15,966	344	34,251
Total	95	59,872	405	93,922

As already stated, it was European enterprise which established the earliest industries along the Bhagirathi of which Howrah, as the 'workshop' of Calcutta, formed the most important nucleus. The growth of industries in Howrah was thus related to the factors influencing the development of industries in Europe besides the local factors which had a direct bearing on them. Before 1790, Howrah was little influenced by the industrial revolution; the manufactories consisting of an indigo workshop, a rope factory, few docks and several distilleries with sugar works used to supply the essential needs of Europeans for which purpose they existed. The indigo workshops were built mainly for commercial purposes. Associated with the bitter memories of forced labour imposed on the local people by European 'interlopers' they survived till the cheaper aniline dyes rooted them out. In the last decade of the 18th century the second phase in the history of these industries started. The impact of the factory industry which had been introduced well in England by the end of the 18th century[1] was felt in Howrah also and the screwing and baling of cotton and subsequently jute and hemp gave rise to a number of screws in the city which possessed a rich hinterland well known for the production of these commodities. This was due to the demand of the manufacturers in the United Kingdom who urged the East India Company in 1788 to supply them with "good cotton for their rising industry."[2] At the same time the local demand of

[1] D. H. Buchanan—op. cit. p. 127.
[2] ibid. p. 195.

ships and their repairs caused modern docks to be built first at Salkia in 1796. During the early part of the 19th century, due to the war and famine in South India, a large number of dockyards was built. To meet the needs of shipping, ropeworks started growing and besides the old ropework of the Stalkarts there were three others in Howrah, Sibpur and Ghusuri before 1815. During the same period chintz, canvas and paper started to be manufactured. Iron works, in response to the needs of the dock-yards and textile works, followed and the Albion Mill erected before 1811 was traced by O'Malley to be the earliest of its kind in Howrah.[1] Steam, by this time, was introduced and a steam-saw of one Captain Stewart was started in Sibpur at a place which seems to have been occupied later by the Albion Mills. Steam vessels started operating in the Bhagirathi from 1823. The dock-yards in Howrah increased in number due to the transfer of yards from the other side of the river. The increase in the number of industries was further accelerated after free scope was given in this behalf by the Charter of 1814.[2] Thus, before 1825 the ship-building and repairing units as also textile and rope works established a firm foothold at Ghusuri, Howrah and Sibpur whereas a few other industries like iron, paper, canvas etc., started operating while the distilleries with sugar works continued their existence. Power derived from steam began to be utilized in operating machinery, thus bringing "the new power-driven machinery into the orient."[3]

In the next phase, steam began to be used extensively in docks, paper mills, flour mills, textile industries besides silk-reeling, cannon-boring, coining money and in coal mines. This phase continued up to the middle of the 19th century when the railways started operating from Howrah. This was followed by the opening of some new and big industries in the city. The oil mills of Messrs. Jessop & Co. (1830), iron works of Messrs. Burn & Co. (1846), and the flour mills of Messrs. Jessop & Co. were conspicuous on the city's river front.[4] Though steam began to be employed in different industries during this stage, it could not make its mark on the industries due, possibly, to the non-availability of coal in sufficient quantities, which, though discovered before 1820 in Raniganj, used to come through the "slow and difficult" Damodar river navigable up to Amta only by boats of 10 to 20 tons' capacity.[5] This form of transport continued till the railway lines extended to Raniganj in 1855 to stimulate the mining of coal and subsequent industrial development on either side of the Bhagirathi.[6] Within 30 years after the discovery of Raniganj coal,

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[1] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 108.
[2] A. K. Roy—op. cit. p. 122.
[3] D. H. Buchanan—op. cit. p. 127.
[4] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 108-13.
[5] J. Murray—Handbook of Bengal Presidency with an Account of Calcutta City. London, 1882. p. 84.
[6] W. Kirk—"The Cotton and Jute Industries in India", reprint from the Scottish Geographical Magazine, Vol. 72. No. 1. 1956. p. 43.

its production rose to 70,000 tons per annum and it supplied fuel for 150 steam engines.[1]

Another important factor responsible for the comparatively slower growth of industries was the after-effect of the free scope given by the Charter of 1817, which resulted in the "rage of speculation and inordinate gains on the part of the directors, overtrading, extravagant miscalculation and excessive expense in living," and for this a number of firms went into liquidation. Three big firms in Howrah had a total liability of £ 6,032,000 in 1833-34.[2] This recession in the early thirties of the last century was further accentuated by the fact that by 1830 the U.S.A. had become the principal supplier of cotton to the U.K., especially after the invention of a new saw-gin by Whitney,[3] which seems to have had a direct effect on the working of cotton screws in the city. But the industries, it seems, were recovering in the forties when, as already stated, some new and big industries were established.

The third and a very important phase began in the middle of the 19th century after the establishment of Howrah as a railway terminus in 1854. Howrah, which started growing as a part of Calcutta, a 'central-place' city, and later with the development of the industries became a 'specialized-function' urban agglomeration, began functioning, also, as a 'break-of-bulk' city with the beginning of the railways. The importance of this railway, contributing its mite to the growth of local industries, can be gauged from the fact that by 1858, after a geological survey was finished by T. Oldham, the amount of output of Raniganj coal rose to 2,20,000 tons[4] whereas only a decade before it produced only 70,000 tons a year. Curiously enough the beginning of this phase coincided with "the hey-day of the black country iron trade," when both large and small producers were to be found in the Birmingham area,[5] a similarity of which we find in the Howrah area of today. Perhaps, this impetus in Birmingham encouraged the start of a number of iron-works in Howrah during this period about which mention has already been made. Howrah, like the rest of India, felt the impact of the "momentous economic change"[6] which occurred a quarter of a century earlier in Europe as a result of the transport 'revolution' brought in by roads, railways and steamships.[7] Telegraph, which forms an integral part of world commerce and industry, started functioning from 1855,

[1] The Calcutta Review, Vol. 4—op. cit. p. 479.

[2] A. K. Roy—op. cit. p. 122.

[3] D. R. Gadgil—The Industrial Evolution of India in recent times. Madras, 1924. p. 16.

[4] L. S. S. O'Malley—History of Bengal, Bihar and Orissa. Calcutta, 1925; compiled from p. 24.

[5] W. K. V. Gale—Birmingham and its regional setting, British Association for the Advancement of Science. Birmingham, 1950. p. 204.

[6] D. H. Buchanan—op. cit. p. 128.

[7] D. R. Gadgil—op. cit. p. 15.

when a telegraph cable terminus was erected near Bandhaghat in Salkia.[1]

In 1835, when the flax crop failed, there was some demand of jute in the U.K., which was further accentuated when in Dundee, one of the chief centres of the whaling industry, it was found in the same year that jute could be spun into yarns by the use of the whale oil.[2] But the jute pressing works came into notice only towards the beginning of the third quarter of the 19th century when jute began to supplant flax, a product of the Baltic States, whose supply was stopped due to the war with Russia in 1854, thus increasing the demand of jute in the U.K. and elsewhere. The jute industry in Dundee experienced a sensational spell of activity from 1854 to 1857[3] which was reflected in Howrah where within a decade a number of Jute presses were erected in Golabari, Howrah and Sibpur for packing and baling jute for export. The iron industries, already mentioned, began to flourish also due to the demand of the other industries which had started before and they began to earn sizeable profits almost from the very beginning. The failure of cotton crop in America in 1846[4] created a demand in the U.K. for Indian cotton and as a result some cotton-screws in Ghusuri and Santragachhi seem to have originated in the middle of the 19th century. The other important factors which influenced the industries were the American Civil War from 1861 to 1865, the opening of the Suez Canal in 1870 and the construction of the Howrah Pontoon Bridge in 1874. The American Civil War led to the closing of ports of the cotton-growing districts in the south. As a result, Lancashire experienced a cotton famine which led the cotton manufacturers in the U.K. to turn their attention to India where the pressing and baling industry experienced days of prosperity.[5] This was reflected in the newly erected cotton and jute-screws in the city. The big cotton mill in Ghusuri is known to have existed before 1872.[6]

The opening of the Suez Canal[7] in 1870 stimulated European factory goods to flow comparatively free and cheap to the oriental countries. It produced another effect which proved vital for the big industries. Thus wrote D. H. Buchanan: "But the very perfection of the system at home and the very improvement of the means of bringing its goods to the world's markets meant that the factory system itself could now be transplanted even to oriental countries. Spare parts could be obtained quickly and cheaply, and mechanics and engineers to install, operate and repair machinery could go to and

[1] C. N. Banerjei—op. cit. p. 41.
[2] H. W. Smith—The Jute Industry in India, Bombay. p. 4.
[3] ibid.
[4] D. R. Gadgil—op. cit. p. 16.
[5] The Jute Industry in India—op. cit. p. 5; D. R. Gadgil—op. cit. p. 17.
[6] C. N. Banerjei—op. cit. compiled from p. 85.
[7] D. R. Gadgil—op. cit. p. 65.

from India at much less sacrifice of time, money and convenience."[1] Thus, like the railways, the textile industry started and grew in importance with imported machinery.[2] In the meantime the railways extended to Mughalsarai in 1862 and to Ghaziabad in 1864,[3] thus "opening up the markets and tapping the supplies of raw materials" from the interior. It helped to bring from Bihar and Uttar Pradesh general casual labourers to this industrial area. This type of labourers were unknown in India before 1860-70.[4] This was the general background in the first two decades after 1850.

The industries in Howrah reacted subsequently under these circumstances. Within the first 12 years of 1850, besides the industries already mentioned, many new industries like paper, chemicals, wood, oil, printing etc. were started.[5] The big jute mills like the Sibpur (Old & New), the Howrah and the Ganges jute mills started operating during 1874-75. They were described as "predominant among the industrial concerns conducted on European lines."[6] The reason for opening so many big mills within two years was due to the boom experienced by the jute industry during 1868-73 when "five mills simply coined money." Coal production was doubled in the decade ending in 1878 and the reason may, partly, be attributed to virtual free trade except the revenue duties on liquors, arms &c., to the commercial revolution and to the development of the railways which also doubled during the decade.[7] The problem of mill labour was acute as only a few immigrants started coming in this decade from Bihar, Chotanagpur and Orissa.[8] Subsequently, another jute mill and three other cotton mills in Salkia and Ghusuri, several jute presses, a number of big iron-works, railway workshops, flour mills on the riverside and a number of small engineering firms in the interior started operating in the city.

The Howrah-Shalimar Branch of the railways with the Shalimar terminus was constructed in 1883. Construction of the Port Trust Railways along the river front to provide rail transport to big industries, the extension of the South Eastern Railways opening up Central and South India in 1900, and the Light Railways connecting the interior of Howrah and Hooghly districts towards the beginning of the 20th century followed subsequently.[9] Sugar factories and distilleries, at the beginning of the 20th century, were experiencing foreign

[1] D. H. Buchanan—op. cit. p. 127.
[2] D. R. Gadgil—op. cit. p. 223.
[3] Eastern Railway—A Year of Progress, 1957-58. pp. 4 & 5.
[4] D. R. Gadgil—op. cit. p. 21.
[5] C. N. Banerjei—op. cit. compiled from pp. 82-5.
[6] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 111 & 112.
[7] D. H. Buchanan—op. cit. compiled from pp. 137 & 138.
[8] C. N. Banerjei—op. cit. p. 7; W. W. Hunter—A Statistical Account etc., op. cit. pp. 281-97.
[9] A. K. Roy—op. cit. pp. 124-5; L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 125-7.

competition and did not flourish well.[1] Stupendous changes in the composition of the local populace occurred during the 25 years ending in 1901 when a large percentage of the dwellers of the city was composed of immigrants from Uttar Pradesh, Bihar and Orissa.[2] This immigration was mainly due to the demand for industrial labour.

Quantitatively, the most important period in the history of the industries of Howrah is the last 50 years. The impact of two World Wars, the last of which brought the theatre of hostilities on the eastern border of India, was very great. This period is marked first by the *Swadeshi* movement,[3] which started in the early 20th century,[4] the economic slump of early thirties, the partition of the country in 1947, and independence of India in the following year and subsequent Five Year Plans. The *Swadeshi* movement caused "the disposal of spindles,"[5] which resulted in the benefit of handloom weavers who formed a considerable percentage of population of the Hooghly and Howrah districts. Perhaps, the number of cotton mills did not increase due to the fresh impetus received by handloom weavers on account of this movement. Another important limiting factor attributed by Foley[6] was the scarcity of labour due to longer periods of work and lower wages prevailing in the cotton mills. Thus, the total number of cotton and hosiery mills in Howrah in 1925 remained the same as they were in 1908. The small-scale industries also got local support because of the *Swadeshi* movement but the result was not conspicuous.

By 1914, almost every city in India was connected by railways[7] and the increased demand of rolling stock and repairing work[8] resulted in an increase in the number of railway workshops in the first quarter of the 20th century. Thus, Howrah possessed six railway workshops in 1925; two more than it had in 1908.

The first World War created a large demand for jute and steel goods besides machinery required for the bigger industries for their maintenance and repairing. The effect of this on Howrah can be gauged by the fact that in 1925 it had over a hundred large registered industrial concerns within and just outside its municipal limits, and a number of small-scale industrial concerns in the interior of the city. These small-scale industries grew rapidly in number due to the war, the boom-period of which lasted up to early twenties, before the worldwide depression started Thus, in 1931 though the total number of large registered firms was a little higher, the number of workers

[1] L. S. S. O'Malley—op. cit. p. 114.
[2] Census of India, Bengal, 1901.
[3] The *Swadeshi* movement was started in 1905 by the Indian National Congress. It tried to induce the people to use country-made articles and to avoid the purchase of foreign goods.
[4] L. S. S. O'Malley and M. Chakravarti—op cit. p. 94.
[5] W. Kirk—op. cit. p. 48.
[6] B. Foley—Report of Labour in Bengal, 1906.
[7] D. H. Buchanan- -op. cit. p. 140.
[8] D. R. Gadgil—op. cit. p. 151.

employed was considerably less than that in 1925.[1] The increase in the number of general engineering firms from thirty-four to forty-five and a few other subsidiary firms and jute mills contributed to the general increase in the number of concerns but the total number of workers employed in the big mills was far less than those employed in 1925; the labour population in eight jute mills in 1925 was 36,335 and in 1931 their number in eleven jute mills was 21,881. At the commencement of the Second World War there was a large increase in the number of industrial employees. The number of large registered firms increased from 111 in 1931 to 132 in 1940. The increase in the number of the general engineering firms was not significant at this stage. They increased from forty-five in 1931 to fifty-four in 1940. The other subsidiary industries, particularly the hosiery firms, increased in number. The effect of the war (1939-45) was evident in 1946, when the total number of such firms increased from 132 to 220 with a considerable increase in the number of workers employed in almost every industry. The engineering industries more than doubled their numbers during these six years. The metal industries also followed suit. But certain other categories of industries, however, did not increase perceptibly during these war years.

After the war, the effect of the partition of the country was felt by the jute industry in particular. Incidentally, the important jute growing area in West Bengal lay in the Pursura-Tarakeswar and Haripal-Chanditala areas in the adjacent Hooghly district.[2] The industry, however, survived and is now carrying on mainly due to its location in the port area—the main jute growing areas being in East Pakistan.[3] The other industries were not in their hey-day, but the protection given by the Government by restricting imports subsequent to independence, allowed the industries not only to tide over the situation but gave them an impetus the effect of which resulted in a phenomenal rise in their number to over 400 in 1953 with a corresponding increase in the number of workers. Several new industries were started and in the same year the city possessed several modern firms manufacturing razor blades, umbrellas, woodworks, furniture both wooden and metal, rubber footwear and hoses, storage batteries, electric stampings, coaches, plastic articles etc., besides the other firms already referred to. Apart from over 1,157 large registered concerns with 1,79,661 workers in 1965, the district, including the city, possessed several hundred smaller concerns, a large percentage of which belonged to the small-scale engineering industries. These small firms were benefited much due to the restriction on the import

[1] Compiled from Large Industrial Establishments etc., 1925, 1931, 1940, 1946 and 1953—op. cit.
[2] A. B. Chatterjee—"Jute Areas of West Bengal", Abstract, Indian Science Congress, 1951.
[3] W. Kirk—op. cit. p. 50.

of foreign-made feeder machinery of the textiles, agricultural machine manufacturing, automobile manufacturing and ship-building and repairing industries.[1]

Changes in the industrial pattern

In the first quarter of the 20th century, with the exception of a few factories in Dharamtala, Andul Road and Santragachhi, most of the industrial units were located in the riverside area between the Grand Trunk Road and the Bhagirathi and along the Belilios Road and Banaras Road. Recent industrial growth in Howrah is marked by a shift of the industries to 'pockets' in the fringe of the city. The causes seem to be (*a*) congestion and the high price of land on the riverside and inner areas, (*b*) the development of rail and road transport, particularly the latter, which brings cheaper lands in the outskirts within easier reach, and (*c*) development in the industrial organization. Thus, the Dharamtala area in the northern part of the city has become conspicuous industrial nucleus within recent times with the big as well as small industries like cotton and edible oil mills, glass, pottery, knitting and hosiery factories, jute presses, engineering works etc. This change has also been influenced by the existence of the big Railway Carriage and Wagon Workshops near which a number of iron and other works grew. The Dharamtala industrial area of the Howrah city is connected with this industrial 'pocket' outside the city limits. The extensive railway sidings of the Eastern Railways in the west, the Grand Trunk Road in the east and the absence of good residential quarters favourably mark the location of the industries in the Dharamtala area. The Santragachhi area in the west-central fringe is similarly provided with extensive sidings of the South Eastern Railways and railway workshops and a good road running from the Howrah terminus through the central part of the city. The area, however, accommodates a good residential locality which seems to be the main reason why the industries located here did not grow in numbers though a few took their roots from the middle of the 19th century. The Andul Road area in the south has the advantage of the Shalimar Branch of the South Eastern Railways and the Andul Road connecting the riverside with the Grand Trunk Road. The area adjoins comparatively cheaper and open agricultural lands on the west and is marked by the absence of good residential quarters. Of the two important industrial 'pockets', the one in Dasnagar is only about 600 yards west of the municipal limit in an open agricultural tract connected by the Makarda Road and the Light Railways. The South Eastern Railway lines also pass through Dasnagar. The area is named after Shri Alamohan Das who started with engineering industries and subsequently sponsored textile manufacture, banking etc. The other 'pocket', a smaller one in Belgachhia in the north, is in a purely agricultural tract but is served by the important Banaras

[1] Information collected from field enquiries; J. Bonerjee—op. cit. p. 17.

Road. The industries here may be considered as appendages to the North Bantra industrial units. The eastern part of Belgachhia recently came into prominence because of its selection as the site for a Government industrial estate.

Zones of industries

The earliest industries like the dock-yards, roperies, indigo factories and rum distilleries developed in segments on the riverside. Subsequent development of the other industries besides an increase in the number of the existing ones in addition to the warehouses of salt, coal and grain, converted the entire river front extending for over four miles into an inner belt of industries. After the construction of the Howrah and Shalimar railway stations and the pontoon bridge over the Bhagirathi, this belt was partitioned into three. With the exception of a few, the bigger units are all located in this belt, which lies broadly between the Grand Trunk Road and the river. Later industries penetrated into the interior along convenient roads in suitable localities in an unplanned sprawl which in places was checked only by the existence of good residential districts or some physical barriers. These are evident from the study of these zones and their characteristic features which are given below.

(1) The Salkia-Ghusuri zone: This is the northern part of the main belt extending from the present Howrah Bridge approach and I. C. Bose Road in the south to the Ghusuri area in the north through Golabari and Bandhaghat. The belt merges with the riverside industrial tract within the Baly municipality which again extends up to the Belur Math. The entire riparian area with the Salkia School Road, J. N. Mukherjee Road and its continuation to the Joyabibi Lane forms a compact industrial zone. The majority of the dock-yards, all the jute presses and most of the cotton mills of the city besides important jute mills, roperies, cotton ginning and baling factories, metal foundries and glass-works, chemical and food-product industries, in addition to timber-yards and warehouses, are located in this zone. From this belt a smaller and less compact triangular wedge of industrial district with its apex on the Guha Road-Grand Trunk Road (North) crossing extends towards the west. Metal-founding, manufacture of metal containers, steel trunks, iron hooks and other engineering industries are to be found here.

(2) The Central Salkia zone: From the I. C. Bose Road area a broad belt of industries extends north-west to Banaras Road and Haraganj encircling a big residential area of Central Salkia. The industries in the northern part of this section extend mainly along the Banaras Road in the west and Sri Arabinda Road in the east, the latter joining the compact riverside industrial zone further east. This is one of the densely inhabited areas of the city where factories and shops exist cheek by jowl with residential units in many places. The area houses most of the knitting and hosiery factories together with chemical, food, printing and transport works as also a few edible oil

mills, a small jute mill, a railway workshop etc. The Banaras Road area is also dotted with metal foundries and factories manufacturing metal containers, steel trunks etc. The westward extension of this belt is limited by the railway lines and the swampy areas adjacent to it.

(3) The East Bamangachhi zone: The Dharamtala area in this zone is mainly industrial. It extends towards the east from the Eastern Railway lines to the Grand Trunk Road (North). The industries are concentrated in a triangular area with its apex at the Dharamtala Road-Grand Trunk Road crossing and its base along the Kali Mazumdar Road. They extend further north to Lilua. The industries already described in the section on 'Industrial Patterns' are not very old. The machinery and metal-container manufacturing industries are conspicuous among the iron works, particularly, in the Grand Trunk Road area. This may be due to the intensive subdivision resulting in a high degree of localization of the industry.

(4) The Ramkrishnapur-Sibpur zone: Situated between the Howrah and Shalimar railway termini this is a very big and compact zone extending from the river to the Grand Trunk Road (South). Most of the big jute and flour mills, large roperies, dock-yards and oil mills, gas, petroleum and chemical factories besides iron and printing works are located here. All these big industries together with the large grain warehouses and bunker-coal storage space are hemmed in by the railways on the north and south, good residential localities of Sibpur on the west, the central business and administrative area on the north and the river on the east, leaving no space for further expansion.

(5) The Shalimar zone: South of the Shalimar railway yard and warehouses is a comparatively small riverside area adjoining the Bengal Engineering College and the Botanic Garden on the west, a large timber yard on the south-west on the riverside and a good but small residential locality on the north-west. Dock-yards, saw mills and roperies exist on the bank of the river while further inland are the chemical factories and a number of iron works extending north-west along the Andul Road into a rural surrounding.

(6) The Belilios Road zone: With a marked concentration in the Banaras Road and the Narasinha Dutt Road areas to the north the small engineering industries of Howrah extend south to Netaji Subhas Road. The North Bantra area is characterized by a large number of metal-founding works while the Narasinha Dutt Road is flanked by iron works manufacturing mostly bolts, nuts, chains, spring etc. The Belilios Road area is conspicuous for general engineering and jobbing establishments, metal foundries and manufactories of implements and machinery. Besides these, oil mills, printing works, knitting and hosiery units are also developing in this area.

CHAPTER VI

BANKING, TRADE AND COMMERCE

BANKING AND FINANCE

History of indigenous banking

The earliest reference to the existence of a system of indigenous banking in this region is found in Kavikankan Mukundaram's *Chandimangal*, a work of circa A.D. 1600, which describes the activities of a "class of shroffs, usually called poddars, who exchanged cowries (shells) and silver coins, the usual currency of a Bengal market."[1] According to Tavernier "they acted as bankers and money-changers and remitted money for others from one town to another and issued letters of exchange."[2] They had cornered the bulk of the specie of the land and operated a network of houses in almost every part of the country.[3] The Bengal District Records of the 18th century show that revenue was not paid by the zemindars to the officers of the East India Company direct but was collected through the agency of these shroffs. As losses due to misappropriation by the middlemen in various ways was inherent in the system, it was abolished in 1778. During the Governorship of H. Verelst (1767), "the East India Company had to take the help of this class of men for guarding against the withdrawal of coins from circulation. They allowed them the usual discount (or *bata*) on sicca rupees. The sicca rupees were accepted at the Company's mint three years after issue at the rate of 111/116 parts of the original value. They were recoined, i.e., raised in value by 5/116. This, after deduction of the expenses of coinage and duties and the fee of 1/116 to the assayer of metals, left 3/116 to the shroffs i.e., about 2½ per cent. They however made further profit as they collected the coins from their possessors at a discount. This practice of the shroffs was, as stated by Verelst, introduced by Jagat Seth at the time of Nawab Jafar Khan, but the custom may have been much older."[4]

The banking house of Jagat Seth played "a part in the economic life of Bengal which was so paramount that Burke could compare it with that of the Bank of England."[5] At the beginning of Ali Vardi's reign "the Setts possessed a capital of ten crores of rupees. Soon

[1] Report of the Bengal Provincial Banking Enquiry Committee, 1929-30 (Vol. I). Calcutta, 1930. p. 184.

[2] Tavernier's Travels (Vol. I). pp. 28, 35; (Vol. II). p. 91.

[3] Narendra Krishna Sinha—The Economic History of Bengal (Vol. I). Calcutta, 1961. p. 144.

[4] A View of the Rise, Progress and Present State of the English Government in Bengal: 1772. pp. 94-5.

[5] Narendra Krishna Sinha—op. cit. pp. 148-9.

they established a virtual monopoly in banking over the whole province and all the bankers in Bengal were their factors if not members of their house. With huge cash in their counters they were not only the bankers and treasurers of the Nawab but also of the revenue-farmers and zamindars."[1] The Dutch, the French and the English depended very much on the Seths for commercial credit. Even in 1757 the Dutch borrowed 4 lakhs of rupees at 9 per cent and the French debt before the capture of Chandernagore was a million and a half.[2] "Inland traders must have also thronged their Kothis for the supply of credit for their terms were lenient."[3] Plassey marked the end of their prosperity and the decline of the house was very rapid after the brutal murder of its leading members at the instance of Mir Qasim. After the grant of the *Diwāni*, this institution ceased to be the channel of revenue payment and when the treasury was transferred to Calcutta the Jagat Seths practically ceased to act as bankers to the Company. Their sources of wealth dried up and their trade in rupees passed into the hands of smaller shroffs working in collaboration with each other.

With the rise of the 'Agency Houses' and of joint-stock banking at the beginning of the 19th century, the indigenous bankers suffered a serious set back. But, as noticed by the Banking Enquiry Committee[4] in 1929-30, they played and still play an important role in financing industries, internal trade and agriculture. They usually combine banking with some form of trade, wholesale or retail.[5]

Rural indebtedness

It has been aptly said about the Bengali cultivator that "he is born in debt, increases his debt throughout his life and dies more hopelessly in debt than ever."[6] According to the evidence of the Sadar Subdivisional Officer, Howrah before the Bengal Provincial Banking Enquiry Committee (1929-30), the cultivators of the district depended mainly on professional money-lenders and partly on merchants and dealers for obtaining agricultural credit as the co-operative movement had not gained sufficient momentum at that time.[7] The rate of interest charged by the money-lenders varied according to the amount of the loan and the security offered—the usual rates ranging from 12 to 175 per cent per annum.[8] The smaller the advance the higher the rate of interest. Sums in excess of Rs. 25 were not usually advanced without security for which lands had to be mortgaged or ornaments

[1] N. C. Sinha—Studies in Indo-British Economy Hundred Years Ago. Calcutta, 1946. p. 19.

[2-3] Narendra Krishna Sinha—op. cit. p. 149.

[4] op. cit. p. 187. Loans are generally advanced on hundis and this special type of transaction is the distinguishing characteristic of the indigenous bankers.

[5] op. cit. p. 185.

[6] Report of the Bengal Provincial Banking Enquiry Committee, 1929-30 Volume I). p. 74.

[7] op. cit. (Volume III) pp. 103-4; cf. pp. 108, 286.

[8] op. cit. (Volume I). p. 198.

pawned.[1] No loans were given against standing crops.[2] In consequence, landless people experienced great difficulty in securing loans for which they had to mortgage their homesteads or pawn ornaments.[3] In case of failure to repay within the prescribed period, compound interest was charged and if the debtor was still in arrears, realization was effected through the courts. Secured and unsecured loans accounted for about 10% and 90% of all loan cases in the district at that time.[4] Agricultural indebtedness was then on the increase and the evil has not decreased since as would be evident from the fact that in 1965-66 the average per capita debt of members to the co-operative societies amounted to no less than Rs. 109. The following three statements compiled from the unpublished re-survey report on the Mahisgot village in Sankrail police station will give a fair idea of the state of rural indebtedness in the district during 1957-62.[5]

Table I.—DISTRIBUTION OF CASH DEBTS, OLD AND CURRENT, BY PURPOSE: VILLAGE—MAHISGOT: P.S.—SANKRAIL: DISTRICT—HOWRAH

	Cash Outstanding Old Debts				Current Debts			
	1957		1962		1957		1962	
Purpose	(in Rs.)	% of total	(in Rs.)	% of total	(in Rs.)	% of total	(in Rs.)	% of total
Current consumption	751	13.90	6,252	53.65	537	24.01	432	35.94
Marriage	2,545	47.09	332	2.85	290	12.96	200	16.64
Medical	495	9.16	10	0.08	614	27.45	100	8.32
Cost of repairing & house building	550	10.18	400	3.43	—	—	—	—
Repayment of debts	90	1.66	1,630	13.00	249	11.13	120	9.98
Sub-Total of non-production credit	4,431	81.99	8,624	74.00	1,690	75.55	852	70.88
Cultivation expenses	86	1.59	500	4.29	102	4.56	50	4.16
Trade	250	4.63	200	1.72	25	1.12	—	—
Purchase of livestock	437	8.09	330	2.83	420	18.77	—	—
Purchase of land	200	3.70	2,000	17.16	—	—	300	24.96
Sub-Total of production credit	973	18.01	3,030	26.00	547	24.45	350	29.12
Grand Total	5,404	100.00	11,654	100.00	2,237	100.00	1,202	100.00

[1] op. cit. (Volume III). p. 108. Evidence of the Subdivisional Officer, Uluberia.
[2] loc. cit.
[3] op. cit. (Volume III). p. 107.
[4] op. cit. (Volume I). p. 197.
[5] Gobinda Chandra Mondal and Nripen Bandyopadhyay—Mahisgot Village Survey. Santiniketan, 1967. Para 6.1 ff.

Table II.—DEBTS AMONG OCCUPATIONAL GROUPS IN MAHISGOT VILLAGE (P.S. SANKRAIL): HOWRAH DISTRICT

(Percentage figures in Cols. 2 to 13 are shown within brackets)

Occupational Groups	No. of Families in Debts		Old Outstanding Debt Cash (Rs.)		Old Outstanding Debt Kind (Mds.)		Current Debt Cash (Rs.)	Current Debt Kind (Mds.)		Grand Total Cash (Rs.)		Grand Total Kind (Mds.)		Burden of Cash Debts per Household (Rs.)		Percentage of Indebted Household in each Occupational Group	
	1957	1962	1957	1962	1957	1962	1957	1962	1957	1957	1962	1957	1962	1957	1962	1957	1962
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Cultivation of land wholly owned	9 (12.00)	26 (32.50)	810 (15.0)	4140 (35.52)	11.00 (23.5)	—	104 (4.6)	522 (43.43)	9.5 (13.0)	914 (12.0)	4662 (36.26)	20.5 (17.1)	—	101.56	179.31	47.37	53.06
Cultivation of land mainly owned	10 (13.33)	16 (20.00)	1336 (24 7)	1587 (13.62)	4 0 (8.5)	—	120 (5.4)	170 (14.14)	14.0 (19·2)	1456 (19.1)	1757 (13.67)	18.0 (15.0)	—	145.60	109.81	36.71	33.33
Cultivation of land wholly and mainly unowned	17 (22.67)	3 3.75)	133 (2·2)	270 (2 32)	10.0 (21.1)	—	512 (22.9)	—	34.0 (46 6)	645 (8.4)	270 (2.11)	44.0 (36·7)	—	37.94	90.00	58.62	60.00
Agricultural labour	17 (22.67)	21 (26 25)	501 (9.3)	2380 (20.44)	21.0 (44.7)	—	195 (8.7)	110 (9.15)	13.0 (17.8)	696 (9.1)	2492 (19.38)	34.0 (28.3)	—	40.94	118.67	56.67	41.18
Production other than cultivation	2 (2.67)	8 (10 00)	80 (1.5)	670 (5 75)	—	40	20 (0.9)	300 (24.96)	—	100 (1.3)	970 (7·54)	—	40	50.00	121.25	100.00	29.63
Trade and Commerce	7 (9.33)	2 (2.50)	1844 (34.1)	405 (3.47)	1.0 (2.1)	—	216 (9.6)	100 (8.32)	2.5 (3.4)	2060 (27·0)	505 (3.93)	3.5 (2.9)	—	294.28	252.50	33 33	11.76
Service & Miscellaneous	13 (17.33)	4 (5.00)	700 (12 9)	2200 (18 88)	—	—	1070 (47.8)	—	—	1770 (23 1)	2200 (17.11)	—	—	136.15	550.00	48.14	57 14
Total	75 (100.00)	80 (100.00)	5404·0 (100.0)	11654 (100.00)	47.0 (100.0)	40	2237 (100.00)	1202 —	73.0 (100.00)	7641.0 (100.00)	12856 —	120.0 (100.00)	40	101.88	160.70	48.08	44.44

Table III.—DISTRIBUTION OF BORROWINGS AND DEBTS, OLD AND CURRENT: VILLAGE—MAHISGOT: P.S.—SANKRAIL: DISTRICT—HOWRAH

Rate of Interest	Old Debts				Current Debts			
	1957		1962		1957		1962	
	(in Rs.)	% of total	(in Rs.)	% of total	(in Rs.)	% of total	(in Rs.)	% of total
Nil	3,212	59.44	2,636	22.62	1,116	49.89	692	57.57
6.25%	—	—	3,081	26.44	32	1.43	50	4.16
Up to 10%	350	6.48	270	2.32	—	—	—	—
Up to 20%	80	1.48	475	4.08	236	10.55	—	—
Up to 25%	800	14.80	2,325	19.95	—	—	—	—
Up to 37%	962	17.80	1,887	16.19	657	29.37	460	38.27
Up to 75%	—	—	730	6.26	146	6.53	—	—
100%	—	—	250	2.14	50	2.23	—	—
Total	5,404	100.00	11,654	100.00	2,237	100.00	1,202	100.00

Transactions in cash or kind between private credit agencies (other than commercial banks) and agriculturists are now regulated by the Bengal Money Lenders Act of 1940, which enjoins upon every money-lender to obtain a licence valid for 3 years from appropriate authorities, maintain a cash book, ledger and a receipt book and observe other relevant formalities. Under the Act, the borrower is not liable to pay any amount in respect of the principal and interest of a loan which, together with any amount already paid, exceeds twice the amount of the original loan. He is also not bound to pay simple interest exceeding 10 per cent on unsecured loans and 8 per cent on secured ones. The money-lenders so licensed under the Act numbered 120 in the district in 1966.[1]

Urban indebtedness

Except for a report[2] on the extent of indebtedness among the jute mill workers of Howrah, submitted in 1929-30 by the Secretary, Indian Jute Mills Association to the Bengal Provincial Banking Enquiry Committee, no other authoritative information is available about urban indebtedness in the district. About 25 per cent of the employees of the Fort Gloster Jute Manufacturing Co. Ltd., were then indebted to the extent of Rs. 25 per head, the usual rate of interest being 150 to 300 per cent per annum. Compound interest was charged in most cases. Loans were granted on notes of hand and *hāt-chitās*. Among the employees of Howrah Mills 30 to 35 per cent were in debts, the burden varying on an average from Rs. 15 to Rs. 25 per

[1] Source: District Magistrate, Howrah.
[2] op. cit. (Volume III, Part II). pp. 66-71.

head. The interest charged was 325 per cent per annum payable weekly. Usually loans were repaid within a period of six months. About 20 per cent of the employees of the Baly Jute Co. Ltd., were found to be indebted to the extent of Rs. 20 per head. Interest charged was usually 150 per cent which was compounded in case of failure to repay within the time fixed. Loans were also contracted on the *kisti* (instalment) system. The Kabuli money-lenders demanded signature or thumb impression of the loanee in his books on a one-anna stamp where they deemed it necessary. In many cases it was found that the debtors, failing to repay, absconded. In Lawrence Mills 27 per cent of the employees were indebted, the per capita amount being only Rs. 6 which carried simple interest at 12 paise per rupee per month. Loans were usually repaid within two months.

Joint-stock banks

There are many branches of well-known joint-stock banks in the municipal and non-municipal towns of the district which play an important role in harnessing the savings of the people. The State Bank of India having branches at Howrah and Uluberia opened in 1925 and 1958 respectively and Pay Offices at Sibpur, Salkia and Baltikuri opened respectively in 1947, 1960 and 1965, had deposits amounting to Rs. 4,380 lakhs during the year 1966 while its advances amounted to Rs. 1,395 lakhs during the same period.[1] The United Bank of India Ltd. (established on 18. 12. 1950 after merger with the Hooghly Bank Ltd.) has branches at Baly, Howrah, Salkia, Belur, Sibpur, Lilua and the Bengal Engineering College, Sibpur opened in 1934, 1936, 1939, 1940, 1944, 1958 and 1963 respectively.[2] Its deposits during 1966 were Rs. 530 lakhs while advances during the same year amounted to Rs. 47.32 lakhs.[3] The United Commercial Bank, Allahabad Bank, Bank of India, Union Bank of India, Bank of Baroda, Central Bank of India and Mercantile Bank have a branch each in Howrah town while the Punjab National Bank has a branch at Lilua, the dates of their opening being October 1947, April 1966, December 1963, December 1966, December 1964, December 1953, 1909 and June 1958 respectively.[4]

Co-operative Banks

Prior to its re-organization and subsequent re-naming as the Howrah District Central Co-operative Bank in 1958 under the Second Five-Year Plan, the Uluberia Central Co-operative Bank Ltd. was the only Co-operative banking institution of the district which was founded in 1919 with the whole district as its area of operation. The position of the District Central Co-operative Bank during 1965-66 was as given at page 264.[5]

[1] Source: Agent, State Bank of India, Howrah

[2-3] Source: Economist; Department of Economic Studies, United Bank of India Ltd., Calcutta.

[4] Source: Joint Chief Officer, Reserve Bank of India, Department of Banking Operations and Development, Calcutta.

[5] Source: Assistant Registrar of Co-operative Societies, Howrah.

Number of members	..	405
Working capital	..	Rs. 36,84,800
Loans outstanding	..	Rs. 25,22,296
Deposits	..	Rs. 12,03,905
Profit	..	Rs. 29,931

State assistance to agriculture

The extent of assistance rendered to the cultivators through the various Block organizations has been described in Chapter VIII. Besides, the District Magistrate also distributes different kinds of loans to agriculturists. Figures relating to such assistance for the periods 1951-56, 1956-61 and 1961-66 are given below:[1]

(Figures in Rupees)

Period	Agricultural loan	Cattle purchase loan	Fertilizer purchase loan
1951-52 to 1955-56	8,000	22,600	—
1956-57 to 1960-61	8,60,000	1,83,070	1,69,706
1961-62 to 1965-66	9,24,372	3,59,975	2,23,229

Life Insurance and National Savings Schemes

The Life Insurance Corporation of India has three units operating in the district at present, one each at Howrah, Sibpur and Uluberia. During 1965-66 it had a total business of Rs. 295.18 lakhs for 6,694 policies as against Rs. 229.2 lakhs for 5,814 policies in 1964-65 and Rs. 211.84 lakhs for 6,313 policies in 1963-64.[2] In the field of national savings (including Post Office savings accounts and cumulative time deposits) gross and net figures of collection during the period 1961-62 to 1965-66 are given below.[3]

(Figures in lakhs of Rupees)

Year	Gross	Nett*
1961-62	336.75	66.44
1962-63	314.50	45.04
1963-64	366.39	63.99
1964-65	240.50	42.82
1965-66	28.83	2.13

*Difference between gross collection and withdrawals during the year.

State Assistance to industrial development

The State Government renders financial assistance to cottage and small-scale industries of different categories under the Bengal State Aid to Industries Act, the amounts disbursed by the District Magistrate during the years 1961-62, 1962-63, 1963-64, 1964-65 and 1965-66 being Rs. 15,200, Rs. 52,300, Rs. 87,000, Rs. 69,500 and Rs. 70,900

[1] Source: District Magistrate, Howrah.
[2] Source: Senior Divisional Manager, L.I.C., Calcutta.
[3] Source: Regional Director of National Savings, West Bengal.

respectively.[1] Financial assistance also came to the industries from various corporations created for the purpose under the State or Union Acts. The West Bengal Financial Corporation sanctioned Rs. 27.5 lakhs to 10 industrial units during 1956-61 and Rs. 107 lakhs to 35 units during 1961-66 while the total amounts actually disbursed during the corresponding periods were Rs. 20.77 lakhs and Rs. 79.75 lakhs respectively.[2] The Industrial Finance Corporation of India advanced loans amounting to Rs. 15 lakhs to Britannia Building & Iron Ltd., Belur and Salkia and Rs. 30 lakhs to Rayman Engineering Works Ltd., Santragachhi during the Second Five-Year Plan, and Rs. 5.20 lakhs to Binani Metal Works Ltd., Sibpur and Rs. 356 lakhs (including 20 lakhs by way of under-writing) to High Quality Steels Ltd., Sankrail during the Third Five-Year Plan.[3] The extent of assistance rendered by the West Bengal Khadi & Village Industries Board by way of loans and grants to Khadi and other village industries during the period from 1961-62 to 1965-66 is detailed below.

(Figures in Rupees)

Name of Industry	Loans	Grants
Khadi Industry	20.542	13,809
Hand-pounding of Rice Industries	9,000	2,838
Palm-*gur*	375	525
Hand-made Paper Industry	8.500	—
Village Leather	15,000	4,000
Carpentry & Blacksmithy	2,500	3.500
Village Pottery	16,000	2,860
Village Oil	3,800	800

TRADE AND COMMERCE

The agricultural produce of the district as also its animal husbandry products are sold in the village *hāṭs* and fairs, and in markets in urban areas. "In general, Uluberia subdivision forms the main assembling centre for locally-produced paddy, betel-leaf, vegetables and cattle, while Howrah subdivision is an assembling centre for imported jute, vegetables, dry cocoanut, betel-leaf, rice, pulses, oil-seeds and fish."[4] Rice, in which the district is highly deficit, is generally assembled in the form of paddy and rice itself, the main bulk of arrival in the district being from the Ghatal, Kolaghat and Dudkumra areas of Midnapur district just across the Rupnarayan river.[5] The big stockists of those areas send the consignments to the merchants in

[1] Source: District Magistrate, Howrah.
[2] Source: Secretary, West Bengal Financial Corporation, Calcutta.
[3] Source: General Manager, Industrial Finance Corporation of India, New Delhi.
[4] District Handbook on Agricultural Marketing for the district of Howrah. Calcutta, 1961, p. 14.
[5] loc. cit.

the assembling centres of Howrah district through the itinerant *bepāris* who act both as wholesalers and retailers.[1] Locally-produced rice, however, passes in small quantities from the producers to the stockists in the assembling markets and then to the consumers through retailers.[2] Wholesale transaction in rice or paddy is not done on a large scale in the district.[3] Some merchants and godown-keepers purchase directly from the producers and sell in small quantities to the retailers or local consumers.[4] The cultivators in the villages sell both paddy and rice to consumers or part with them towards payment of previous loans.[5] "In Ramkrishnapur market, which imports rice from outside districts and other States, the brokers of the mill-owners at the source (where they are not identical with the *arhatdars* in this market) get the samples and rates approved previously whereafter they despatch the consignments, to be received in the said *arhatdar's* godowns. The brokers of this market in their turn similarly get the samples, rates, etc. duly approved by the buyers, i.e., the petty wholesalers and retailers of Calcutta, Howrah and suburbs, in advance. Delivery is effected at buyers' godowns at their cost by the brokers. For local paddy put in the assembling market (Bakshihat) for sale, the grower is required to pay a charge known as 'Dan' at the rate of 6 paise per maund. A deduction is also made for contribution towards charitable purpose (*Ishwarbritti*), payable by the seller alone, at the rate of 3 paise per maund. In case of rice in Ramkrishnapur market, the brokers, operating between the mill-owners at the source and the *arhatdars* here, and between the latter and the local buyers here, charge, in both the cases, a brokerage at the rate of 6 paise per maund."[6] Following the imposition of the Rice and Paddy Price Control and Movement Order, these markets have lost their importance in recent years.

"The most important feature in the markering of jute is that the growers sell overwhelmingly large proportion of jute in the villages to the peripatetic dealers. In its movement there are three distinct stages, namely, (1) from village to the primary assembling markets, (2) from the primary assembling markets to the kutcha baling centres (secondary markets) and (3) from the kutcha baling centres to the loose jute markets in Calcutta. In primary sales, about 61 per cent of the marketable surplus is disposed of by the growers at their doors, and 31 per cent in the *hats* to the *farias, paikars* and *beparis* and 8 per cent is taken by the cultivators themselves to the kutcha baling centres direct. The *farias, paikars* and the *beparis* are the first link in the chain of intermediaries supplying jute to the secondary markets. The jute that is bought in *hats* is sold to the bigger dealers (or *arhatdars*) in secondary markets who are either themselves balers or who in turn sell to the kutcha balers. The kutcha balers assort and press

[1-5] loc. cit.
[6] op. cit. p. 16.

the jute and despatch them to Calcutta. The *arhatdars* in the secondary market are of four types, classified according to their functions, namely, (1) merchants buying on their own account, (2) commission agents for big buyers, (3) agents of small Calcutta buyers, and (4) agents of sellers, particularly *farias* and *beparis* operating in the countryside. The kutcha balers are either *arhatdars*-cum-balers or the representatives of the jute mills, who purchase, select, bale and despatch jute to the mills."[1]

"Jute is brought to the secondary markets either in loose form (in the strict sense) or in drums of approximately one maund each. As the kutcha baling arrangement in the district . . . is few, it invariably goes from the village and primary markets to the loose jute markets, particularly Shyambazar, in drums. . . .The prices are fixed under open agreement system. The nominated agents of the mills purchasing jute from the local merchants get a commission of Re. 1.25 for each transaction of Rs. 100. The merchants sell to the mills with or without contract. Those who collect jute from the growers through *beparis* pay the latter commission at the rate of 25 to 37 paise per maund. The *pucca arhatdars*, i.e., the merchants who act as agents of the buyers, receive commission from the *beparis* at the rate of 50 paise per maund. Deduction is made in addition to above payments from the grower at the rate of 8 ch. per maund to make up the loss in favour of the beparis on account of driage. This is popularly known as 'Dhalta' or 'Balan'. At Domejur market, deduction is also made for '*Iswarbritti*', payable by seller, at the rate of 2 paise per maund."[2] Betel-leaf is an important cash crop of the district. "So far as Uluberia subdivision is concerned", it "is carried by the producers to the assembling markets, where there are two sets of intermediaries, who are responsible for assembling the commodity. The first set acts as *arhatdar*, popularly called 'Dalal'. He effects the sale of the growers' produce by open auction and charges a commission . . . at the rate of 50 paise to Re. 1 for auction of every 10,000 leaves."[3] In the auction another set of intermediary, called commission agents or *chālāndārs*, take part and purchase the leaves on behalf of distant buyers in Bihar, Uttar Pradesh, Madhya Pradesh, Assam and other States who never present themselves physically, but advance money to the former by postal money order or otherwise.[4] The *chālāndārs* do not realise any commission from the growers except a sum of 31 paise per 10,000 leaves for removal of the stalks.[5] They, however, charge from the distant merchants a commission varying from 75 paise to Re. 1 per 10,000 leaves and Rs. 2 to Rs. 2.50 as packing charges per basket.[6] In Howrah subdivision, the growers

[1] op. cit. pp. 14-5.
[2] op. cit. pp. 16-7.
[3] op. cit. pp. 15-7.
[4] op. cit. p. 15.
[5-6] op. cit. p. 17.

themselves sell their produce to the buyers with no intermediaries between them.[1] Here "the betel leaves are not auctioned but sold by private negotiation by the producers themselves. The price of the leaves sold is paid by the *arhatdars* or banias on behalf of the buyers for which service they charge a commission of 2 paise per rupee. In case the buyers fail to pay back the money to the financing *arhatdars* by the next market day, the latter charges an interest at the same rate, i.e., 2 paise per rupee in addition to his commission. The producer-seller is required to pay 8 paise per bundle of 10,000 leaves as 'Dan' to the market-owner and the buyer has to pay 3 paise per bundle to the darwan of the market, 50 per cent of which goes to the proprietor and the rest is equally shared by the darwan and the manager of the market."[2]

"The market for pulses and oilseeds is housed in a small railway shed opposite Howrah goods shed. . . .The supply is mainly received from outside States, viz., Bihar, Punjab, Madhya Pradesh, U.P., Rajasthan and Madras and it is interesting to note that the transaction takes place on samples, while consignments still remain in the railway wagons or godowns in the Howrah, Ramkrishnapur, Shalimar, Chitpur and Sealdah railway yards. The functionaries in the markets are the mahajans or the agents of the exporting mahajans at the source, the brokers and the buyers who are retailers or petty wholesalers."[3] "As the bulk of consignments of pulses and oilseeds remain in the railway wagons or godowns during transaction, the stock, which is not disposed of within 24 hours of its arrival, is shifted to the private godowns to avoid wharfage. The transaction is effected through brokers who charge a brokerage at the rate of 9 paise per maund in case of pulses and 12 paise per maund in case of oilseeds from the owner-mahajan."[4]

The fish market is located near the Howrah railway station and is commonly known as the Howrah Bridge Market. The supply is received mainly from Agra, Kanpur, Delhi, Orissa, Punjab, Rajasthan, Bombay, Andhra Pradesh, Madras, Bihar and Uttar Pradesh by rail. The sale is effected by the *arhatdars* through open auction. "A commission of 5 paise per rupee is charged by them for rendering this service. The sale proceeds are remitted to the suppliers at the source by postal money order after deducting the commission at the above rate and the advance, if any, made previously together with a further sum at the rate of 2 paise per rupee to be re-imbursed to the suppliers on demand or usually at the close of the year. The buyers are required to pay 75 paise per maund as *Iswarbritti* to the *arhatdar* who deposits the sum to the market committee. The amount is spent

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[1] op. cit. p. 15.
[2] op. cit. p. 17.
[3] op. cit. p. 16.
[4] op. cit. p. 17.

for the maintenance of the market as also for payment to sweepers etc."[1]

Imports & Exports

In 1959-60 the import of agricultural produce into the district far exceeded its export. Rice, dry coconuts, pulses and oilseeds formed the bulk of the imports while jute, dry coconuts and betel-leaves comprised the main exported commodities. The following two tables give relevant statistics about the main items of import and export during 1959-60.[2]

IMPORT OF AGRICULTURAL PRODUCE INTO HOWRAH DISTRICT: 1959-60

Articles	Source	Purpose	Annual volume (in lakhs of quintals)	Value (in lakhs of rupees)
Rice	Orissa and different districts of West Bengal	To meet internal demands and for export to Calcutta	15.00	800.00
Dry Coconuts	Madras, Orissa and Kerala	"	0.26	15.00
Pulses including gram & gram products	Bihar, Punjab, U.P. and Kabul	"	13.00	875.00
Oilseeds	"	"	11.60	620.00
		Total	39.86	2,310.00

EXPORT OF AGRICULTURAL PRODUCE FROM HOWRAH DISTRICT: 1959-60

Articles	Destination	Purpose	Annual volume (in lakhs of quintals)	Value (in lakhs of rupees)
Jute	Calcutta	For consumption in jute mills	0.21	12.00
Dry coconuts	Bihar, U.P., Delhi, East Punjab etc.	To meet external demands	1.10	60.00
Betel-leaf	Bihar, U.P., M.P., Bombay and Assam	"	0.26	15.00
		Total	1.57	87.00

In 1964-65 important agricultural produce passing through the big wholesale markets of Ramkrishnapur, Kalibabu's Bazar, Howrah Bridge Market, Khalore Pan Posta, Domjur and Sankrail consisted of rice, potato, fish, betel-leaf, jute, dry and green coconuts and vegetables. The bulk of these arrivals was despatched outside the district.

[1] op. cit. p. 17.
[2] Source: District Agricultural Marketing Officer, Howrah-Hooghly.

The table[1] below gives an idea of the volume of transactions in these commodities during the same year.

TURNOVER OF AGRICULTURAL PRODUCE IN IMPORTANT MARKETS OF HOWRAH DISTRICT: 1964-65

Market	Commodity	Arrivals (in lakhs of quintals)	Value (in lakhs of rupees)	Percentage of despatch to arrival to different places
Ramkrishnapur	Rice	8.00	60.00	50%—Calcutta
Kalibabu's Bazar, Howrah Town	Potato,	0.36	1.80	Internally consumed
	Fish,	0.10	0.35	,, ,,
	Vegetables	0.27	13.50	,, ,,
Howrah Bridge Market	Fish	2.16	648.00	60%—Calcutta 40%—local markets
	Betel-leaf	3.60	234.00	50%—Calcutta 20%—outside the State 30%—local markets
Khalore Pan Posta	Betel-leaf	0.60	39.00	100%—Howrah Bridge Market
Domjur	Jute	0.90	81.00	60%—Calcutta 40%—Sheoraphuli

The Sankrail market is noted for transactions in green and dry coconuts; in 1964-65 it exported six lakhs of the green variety valued at Rs. 1.5 lakhs and 10.4 lakhs of the dry variety worth Rs. 4.68 lakhs mostly to Calcutta and its suburbs which accounted for 70 per cent of the arrivals and the remaining 30 per cent was despatched to places all over the country.[2] The Howrah pulses and oilseeds market is said to be one of the biggest of its kind in India.[3]

Howrah *Hāṭ*

The Howrah *Hāṭ*, popularly known as '*Maṅglā Hāṭ*' because it sits every Tuesday (*Maṅgal-bār*), comprises several privately-owned marts, consisting of about 5,000 permanent and temporary stalls besides several hundred pavement stalls on *khās* and municipal lands in the heart of Howrah city. It specializes in handling handloom and hosiery products and is perhaps the biggest market of its kind in India. The oldest of the component marts, known as old *Maṅglā Hāṭ*, was established about a century and a half ago, and is noted for its wholesale-cum-retail business in dhotis, sarees, mosquito-curtains and towels (including *gāmchhās*) etc. The principal weaving centres supplying dhotis to this market are Dhaniakhali, Arambagh, Kaikala, Haripal, Dwarhatta, Rajbalhat, Antpur, Jangipara, Begumpur, Serampore, Chandernagore (Farasdanga) in Hooghly district and Debipur in Burdwan district and those supplying sarees are

[1] Source: District Agricultural Marketing Officer, Howrah-Hooghly. Figures pertaining to transactions in rice related to the period prior to the introduction of the Rice/Paddy Movement Control Order.
[2] Source: District Agricultural Marketing Officer, Howrah-Hooghly.
[3] District Handbook of Agricultural Marketing for the district of Howrah. Calcutta, 1961. p. 26.

Dhaniakhali, Ramnagar, Jayanagar, Rajbalhat, Antpur, Jangipara, and Rasidpur in Hooghly district, Selimabad, Surekalna, Ambika Kalna, Katwa and Samudragarh in Burdwan district, Santipur, Fulia and Nabadwip in Nadia district and Asokenagar in 24-Parganas. Mosquito-curtains from Ramjibanpur in Midnapur district, *gāmchhās* (indigenous towels) from Tamluk, Radhamoni, Contai and Midnapur town of the same district, bedsheets and towels from various places of Bankura and silk products from Purulia and Vishnupur in Bankura are special attractions of this mart. Usually the stallholders, known as mahajans, advance money and materials to the weavers who turn out the finished products according to specifications. About half the total business is handled by these mahajans while the remaining half is shared by individual weavers and middlemen. There are several godowns near the mart which usually charge Rs. 2 to Rs. 4 per month for the safe custody of each package according to size. Articles from this *Hāṭ* are sent all over the country and prior to World War II they even found their way to Burma, Ceylon and other foreign countries. The 'Mimani Market', started in 1934, is famous for ready-made garments, chiefly turned out by tailors scattered in different places of the district itself as also in Calcutta, 24-Parganas, Hooghly, Bankura etc. These too are exported to almost all the districts of West Bengal as also to Tripura, Assam, Bihar, Orissa etc. The 'Ganesh *Manglā hāṭ*', established in 1946, is the main assembling centre for hosiery products, especially *genjis* (undervests) from Burrabazar in Calcutta and socks from Diamond Harbour in 24-Parganas. These are sent to Assam, Orissa, Bihar, Uttar Pradesh and Delhi and, up to the early fifties of this century, they used to be exported to Burma and, as late as in 1960-61, to Nepal and Pakistan. The average monetary transactions on a *hāṭ* day in all these marts amount to Rs. 30 lakhs, mostly on credit, and the average attendance is 50,000.

Fairs & *melās*

The fairs and *melās* held chiefly on religious occasions and in rural areas provide opportunities for the sale of huge quantities of country produce. A detailed list (Table II)[1] of fairs and *melās* held in the district round the year is appended to this chapter.

Co-operative marketing

There are 5 large-sized primary co-operative agricultural marketing societies in the district. Their position as on 30.6.1966 is indicated in the table below.[2]

Name of Marketing Society	No. of Members	Working Capital (Rs.)	Value of Sales (Rs.)	Profit (+) Loss (−) (Rs.)
Sibpur Co-operative Marketing Society Ltd.	162	60,415	82,955	(−) 6,251
Syampur Block II Large-sized Primary Co-operative Agricultural Marketing Society Ltd.	430	59,809	1,09,205	(−) 280

(contd.)

[1] Sources: Chairman, Zilla Parishad; Superintendent of Police; and District Agricultural Marketing Officer, Howrah.

[2] Source: Assistant Registrar of Co-operative Societies, Howrah.

Name of Marketing Society	No. of Members	Working Capital (Rs.)	Value of Sales (Rs.)	Profit (+) Loss (−) (Rs.)
Jagatballavpur Large-sized Primary Co-operative Agricultural Marketing Society Ltd.	370	50,807	1,96,251	(−) 1,381
Amta Thana Large-sized Primary Co-operative Agricultural Marketing Society Ltd.	511	18,462	1,49,138	(−) 5,771
Uday Narayanpur Thana Large-sized Primary Co-operative Agricultural Marketing Society Ltd.	886	75,593	2,06,487	(−)18,429

Besides, the Howrah Wholesale Consumers' Co-operative Society Ltd., established in 1964 and the only of its kind in the district, deserves mention. On 30.6.1966 its membership was 98, working capital Rs. 12,71,093, and purchases, sales and profits for the year ending on that date amounted to Rs. 86,10,280, Rs. 69,25,379 and Rs. 35,442 respectively.

Fair price shops

During 1966 the number of ration shops in the district was 325 which supplied 45,700 tonnes of rice, 47,300 tonnes of wheat and wheat products and 13,900 tonnes of sugar to the consumers.[1]

Merchants' associations

Most of the industries in the district, big or small, are affiliated to some Chamber of Commerce or other which have their headquarters in Calcutta.

Labour organizations

A detailed list showing the registered numbers, dates of registration, addresses and memberships of the numerous labour organizations functioning in the district is appended to this chapter (Table III).[2]

Organs for dissemination of trade news

Dissemination of trade news etc. is mainly done by the commercial journals and newspapers published from Calcutta. The Calcutta station of the All India Radio also broadcasts market news regularly

Weights & measures*

Prior to the introduction of the metric system, the traditional weights and measures in vogue in the district are indicated below.

(*i*) Weights—maund, seer, poa, chhatak, kanchcha, tola, siki.

(*ii*) Weights (avordupois)—ton, hundredweight (cwt), quarter, stone, pound, ounce, dram.

(*iii*) Weights (jewellers')—tola or bhari, masha, anna, rati, dhan.

(*iv*) Liquid measure (Indian)—maund, seer, poa, chhatak.

(*v*) Liquid measure (English)—gallon, quart, pint, gill.

(*vi*) Apothecaries' measure (English)—gallon, fluid pint, fluid ounce, fluid dram, minims or drops.

(*vii*) Linear measure—mile, yard, foot, inch.

(*viii*) Land measure—bigha, katha, chhatak.

(*ix*) Cloth measure—gaj, hath, gira, anguli.

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[1] Source : Assistant District Controller of Food & Supplies, Calcutta.

[2] Source : Labour Commissioner, West Bengal.

* At the present the Metric system has completely replaced older weights and measures in all cases except (v).

APPENDIX A

LIST OF MARKETS IN HOWRAH DISTRICT

Name of market	Year of origin	Days when held	Principal agricultural commodities handled	Mainly wholesale or retail	Daily average attendance
Amta P.S					
1. Amta Bazar	1872	Daily	Rice, potato, betel-leaf	Wholesale-cum-retail	2,000 (approx.)
2. Kasipur Hat	1857	"	Vegetables, fruit	Retail	300
3. Raspur Bazar	1883	"	Vegetables	"	100
4. Balichak Bazar	1942	"	"	"	350
5. Chatra Bazar	1944	"	"	"	200
6. Benarashi Bazar	1944	"	"	"	200
7 Udong Bazar	1860	"	Vegetables, rice	"	500
8. Khardaha Hat	1853	"	"	"	375
9. Pore Hat	1921	Tuesdays & Saturdays	"	"	400
10. Kaila Hat	1815	Saturdays	"	"	300
11. Sinchak Hat	1900	Sundays & Thursdays	"	"	300
12. Khariop Hat	1846	Mondays & Fridays	Vegetables, fruit	"	750
13. Chaltakholi Hat	1909	Thursdays & Sundays	Vegetables	"	500
14. Ramchandrapur Bazar	1900	Daily	"	"	300
15. Ramchandrapur Hat	1890	Thursdays & Saturdays	"	Wholesale-cum-retail	750
16. Fatepur Hat	1860	Tuesdays & Saturdays	Vegetables, rice	Retail	350
17. Paliwara Kheptsawari Hat	1900	Fridays	"	"	350
18. Jangalpara Hat	1800	Tuesdays & Saturdays	"	"	400
19. Kanpur Hat	1835	Wednesdays & Saturdays	Vegetables	Wholesale-cum-retail	400
20. Manikara Hat	1800	Mondays & Fridays	"	Retail	350
21. Purathkancharitola Hat	1902	Saturdays	"	"	300
22. Basantapur Hat	1850	Wednesdays & Fridays	"	Wholesale-cum-retail	750
23. Ghoradaha Hat	1900	Wednesdays & Saturdays	"	Retail	250
24. Singti Bazar	1860	Daily	"	"	400
25. Ramsaramchak Hat	1936	Mondays, Wednesdays & Fridays	"	Wholesale-cum-retail	400
26. Panchuram Hat	1946	Daily	"	"	350
27. Udaynarayanpur Bazar	1916	"	"	Retail	350
28. Garbhabanipur Bazar	1872	"	"	"	350
29. Tazpur Bazar	1852	"	"	Wholesale-cum-retail	500
30. Narit Hat	1848	"	"	Retail	300
31. Bhatara Bazar	1873	Tuesdays & Saturdays	"	"	350
32. Raghunathpur Hat	1872	Daily	"	Wholesale-cum-retail	400
33. Malia Bazar	1880	"	Rice, vegetables	"	300
34. Jhikira Bazar	1853	"	Vegetables, fish	Retail	400
35. Khalna Hat	1850	Tuesdays & Saturdays	Fish, vegetables, rice	Wholesale-cum-retail	1,000

LIST OF MARKETS IN HOWRAH DISTRICT—*contd.*

Name of market	Year of origin	Days when held	Principal agricultural commodities handled	Mainly wholesale or retail	Daily average attedance
Amta P.S.—*contd.*					
36. Khalna Bazar	1880	Daily except Tuesdays & Saturdays	Fish, vegetables, rice	Wholesale cum-retail	700
37. Joypur Bazar	1845	,,	Vegetables	Retail	400
Bagnan P.S.					
1. Bakshi Hat	1890	Sundays & Wednesdays	Rice, paddy, gram, coco-nut, potato, vegetables, betel-leaf	Wholesale-cum-retail	3,000 to 6,000
2. Panitras Bazar	1952	Daily	Rice, vegetables, fish	Retail	500
3. Kalyanpur Market	1905	,,	,,	,,	500
4. Bainan Bazar	1850	,,	,,	,,	300
5. Harop Bazar	1892	,,	,,	,,	250
6. Bagnan Bazar	1900	,,	,,	,,	400
7. Khalore Kalibari Bazar	1900	,,	,,	Wholesale-cum-retail	550
8. Bagnan New Betel-Leaf Market	1955	,,	Betel-leaf	,,	250
9. Khalore Betel-Leaf Market	1943	,,	,,	Wholesale	250
10. Dentli Bazar	1943	,,	Vegetables, fish	Retail	100
11. Mellak Hat	1915	Tuesdays & Saturdays	,,	Wholesale-cum-retail	300
12. Antila Bridge Market	1925	Daily	,,	,,	400
13. Harinarayanpur Market	1902	,,	,,	,,	300
14. Nuinta Hat	1852	,,	,,	,,	400
Baly P.S.					
1. Hapta Bazar (Baly Municipality)	1924	Daily	Pulse, fish, vegetables, meat	Retail	1,000
2. Lilua Market (Baly Municipality)	1921	,,	,,	,,	1,000
3. Jagadishpur Bazar	1950	,,	,,	,,	300
Bauria P.S.					
1. Fort Gloster Jute Mill Bazar	1879	Daily except Tuesdays & Saturdays	Vegetables, fish	Retail	200
2. Lawrence Jute Mill Bazar	1870	,,	,,	,,	350
3. Chapkasi Bazar	1889	,,	,,	,,	250
Domjur P.S.					
1. Makardah Hat & Market	1821	Mondays & Fridays; Market daily	Vegetables, potato, coconut	Wholesale-cum-retail	Hat-600 Market-100
2. Domjur Jhapardah Hat & Market	1852	Tuesdays, Thursdays & Saturdays; Market daily	Jute, vegetables, cucumber, green coco-nut, green plantain	,,	500 to 800
3. Dakshin Jhapardah Market	1850	Daily	Paddy, rice, vegetables	Retail	250
4. Kolora Market	1852	,,	,,	,,	200
5. Baluhati Market	1700	Tuesdays & Fridays	,,	,,	400

LIST OF MARKETS IN HOWRAH DISTRICT—*contd.*

Name of market	Year of origin	Days when held	Principal agricultural commodities handled	Mainly wholsale or retail	Daily average attendance
Domjur P.S.—*contd.*					
6. Begri Market	1840	Daily	Paddy, rice, vagetables	Retail	800
7. Khuti Market	1851	"	"	"	150
8. Mahiari Market	1898	"	"	"	150
Golabari P.S.					
1. Goswami Bazar (Howrah Municipality)	1938	Daily	Fish, egg, vegetables	Retail	300
2. Ghusuri New Market	1932	"	"	"	800
3. Haraganj Bazar (Howrah Municipality)	1852	"	"	"	800
4. Sachi Babur Bazar (Howrah Municipality)	1936	"	"	"	400
5. Jai Hind Market (Howrah Municipality)	1949	"	"	"	250
6. Ghusuri Old Market	1902	"	"	"	250
Howrah P.S.					
1. Ramkrishnapur Market	1954	Daily	Rice	Wholesale	360
2. Bhutnath Babur Bazar	1947	"	Fish, egg, vegetables	Retail	750 to 1,000
3. Nutan Bazar	1942	"	"	"	250
4. Sandhya Bazar	1850	"	"	"	250 to 1,000
5. Daw Bazar	1922	"	"	"	200
6. Sarujubala Devi's Bazar	1926	"	"	"	300
7. Gora Bazar	1953	"	"	"	350
8. Sibpur Bazar	1851	"	"	"	1,000 to 1,500
9. Bataitola Bazar	1929	"	"	"	300
10. Bose Bazar	1935	"	"	"	250
11. Chatterjee Bazar	1876	"	"	"	50
12. Kalibabu's Bazar	1887	"	Vegetable, potato, fish	"	1,150 to 1,340
13. Howrah Pulse Market	1910	Daily except Sundays	Pulses, oilseeds	Wholesale	1,250 to 1,500
14. Howrah Bridge Market	Not Known	Daily	Fish	"	1,000 to 1,500
15. "	"	Daily except Tuesdays	Betel-leaf	"	1,000 to 1,500
Jagachha P.S.					
1. Ramrajatola Bazar	1900	Daily	Fish, egg, vegetables	Retail	300
2. Monkhali Bazar	1938	"	"	"	400
3. Banksara Bazar	1943	"	"	"	250
Jagatballavpur P.S.					
1. Munsir Hat & Market	1822	Tuesdays & Sundays; Market daily	Jute, vegetables, paddy	Wholesale-cum-retail	Hat-500 to 600 Market-200
2. Jagatballavpur Naya Market	1842	Daily	"	Retail	150
3. Narendrapur Hat	1916	Sundays & Tuesdays	"	"	150

LIST OF MARKETS IN HOWRAH DISTRICT—*contd.*

Name of market	Year of origin	Days when held	Principal agricultural commodities handled	Mainly wholesale or retail	Daily average attendance
Jagatballavpur P.S.—*contd.*					
4. Siddheswar Hat	1798	Tuesdays & Fridays	Jute, Vegetable, Paddy	Retail	150
5. Sankarpur Hat	1840	Mondays & Wednesdays	Potato, fish, vegetables	"	250
6. Gouripur Market	1921	Daily	Fish, jute, betel-leaf	"	100
7. Bargachia Market	1902	"	Paddy, jute, fish, vegetables	"	250
8. Jagatballavpur Market	1696	"	"	"	200
9. Pantihal Market	1882	Wednesdays	"	"	200
10. Nijbetia Market	1752	Daily	"	"	200
Mallpanchghora P.S.					
1. Bandaghat Bazar	1905	Daily	Pulses, fish, vegetables, meat	Retail	200
Panchla P.S.					
1. Banaharispur Hat	1903	Mondays & Fridays	Rice, vegetables	Retail	60
2. Kanchowki Market	1942	Daily	"	"	200
3. Kuldanga Market	1762	"	Rice, vegetables, betel-leaf	"	350
4. Bowbazar Market	1892	"	"	"	300
5. Jaynagar Market	1920	"	"	"	400
6. Panchla Market	1750	Wednesdays & Saturdays	"	"	200
7. Bekola Market	1752	Daily	"	"	200
Sankrail P.S.					
1. Andul Bazar	1920	Daily	Rice, pulses, fish, vegetables	Retail	500
2. Andul Cocoanut Market	1906	"	Coconut	Wholesale	100
3. Gunberia Bazar	1908	"	Rice, pulses, fish, vegetables	Retail	100
4. Rajarhat	1920	Mondays & Fridays	"	"	200
5. Manikpur Bazar	1925	Daily	"	"	250
6. Hirapur Bazar	1920	"	"	"	50
7. Sankrail Bazar	1902	"	"	"	350
8. Sankrail Station Market	1933	"	Coconut	Wholesale	100
Syampur P.S.					
1. Kamalpur Hat	1855	Thursdays & Sundays	Rice, potatoes, vegetables, sweet potatoes	Wholesale-cum-retail	2,000
2. Kharuberia Hat	1785	Tuesdays & Saturdays	"	"	2,000
3. Bhagabanpur Hat	1943	Wednesdays & Sundays	Vegetables, fish	Retail	300
4. Mulla Hat	1927	Mondays & Fridays	Rice, fish, vegetables	"	450
5. Dentli Hat	1862	Tuesdays & Saturdays	"	"	400

LIST OF MARKETS IN HOWRAH DISTRICT—*contd.*

Name of market	Year of origin	Days when held	Principal agricultural commodities handled	Mainly wholesale or retail	Daily average attendance
Syampur P.S.—*contd.*					
6. Bonlia Khal Hat	1917	Sundays & Thursdays	Rice, fish, vegetables	Wholesale-cum-retail	500
7. Baragachi Hat	1887	Wednesdays & Saturdays	,,	,,	500
8. Naul Hat	1934	Mondays & Fridays	,,	,,	450
9. Sasati Hat	1892	Tuesdays & Saturdays	,,	,,	500
10. Bachhri Hat	1942	Mondays & Thursdays	,,	Retail	300
11. Dewantola Hat	1908	Tuesdays & Saturdays	,,	,,	50
12. Jhumjhumi Hat	1936	Fridays	,,	,,	50
13. Ajodhya Belpulum Hat	1930	Sundays & Wednesdays	,,	Wholesale-cum-retail	500
14. Ichhapur Hat	1941	Sundays & Thursdays	,,	,,	500
15. Baganda Hat	1920	Mondays & Fridays	,,	,,	250
16. Shebpur Hat	1915	,,	,,	,,	200
17. Guzarpur Hat	1881	Tuesdays & Saturdays	,,	,,	250
Uluberia P.S.					
1. Uluberia Cattle Market	Not known	Saturdays	Cattle	—	5,000
2. Dhulasimla Hat	1845	Fridays & Mondays	Vegetables, egg, fish	Wholesale-cum-retail	500 to 1,000
3. Uluberia Poll Bazar	1907	Daily	Rice, vegetables, fish, potatoes	Retail	500
4. Uluberia Hat	1893	Saturdays	Cattle, fish, vegetables	Wholesale-cum-retail	1,000
5. Kalsapa Bazar	1915	Daily	Rice, vegetables, fish, potatoes	,,	700
6. Basudevpur	1890	,,	Vegetables, fish	,,	900
7. Kalinagar Bazar	1877	,,	,,	,,	500
8. Rajpur Bazar	1887	,,	,,	,,	400
9. Chandipur Hat	1910	Mondays & Fridays	,,	,,	650
10 Kulgachhia Station Market	1945	Daily	Rice, vegetables, fish	Retail	400
11. Birshibpur Market	1944	,,	,,	,,	450
12. Samrup Hat	1924	Sundays & Thursdays	,,	,,	400
13. Tulsibari Market	1942	Daily	,,	,,	350
14. Sumda Market	1930	,,	,,	,,	250
15. Banihan Market	1940	,,	,,	,,	500
16. Baniban Hat	1875	Sundays & Wednesdays	,,	Wholesale-cum-retail	700

APPENDIX B

FAIRS AND MELAS

Place of occurrence	Month of Occurrence		Religious or other occasion	Duration (No. of days)	Attendance (Approx.)
	English Calendar	Bengali Calendar			
Amta P.S.					
1. Gouranga Chak	June-July	*Āshāḍh*	Rathajatra	1	200
2. Amta	April-May	*Baisākh*	Baisakhi Purnima	1	5,000
3. Harishpur	Sept.-Oct.	*Āswin*	Durga Puja	1	300
4. Jhikira	June-July	*Āshāḍh*	Rathajatra	7	400
5. Basantapur	April	*Chaitra*	Charak Puja	1	200
6. Ghoradaha	,,	,,	,,	1	200
7. Purash	,,	,,	,,	1	200
8. Khosalpur Bazar	,,	,,	Chaitra Sankranti	1	200
9. Kurit	,,	,,	,,	1	200
10. Raspur	,,	,,	,,	1	200
11. Sheroberia	,,	,,	,,	1	200
12. Jhikira	,,	,,	,,	1	600
13. Durgapur	,,	,,	,,	1	400
14. Bhatora	,,	,,	,,	1	400
15. Kasmali	,,	,,	,,	1	400
16. Kharigeria	,,	,,	,,	1	400
17. Jaypur	June-July	*Āshāḍh*	Rathajatra	1	300
18. Khalna	,,	,,	,,	1	300
19. Amta	,,	,,	,,	2	500
20. Ditto	Sept.-Oct.	*Āswin*	Melaichandi Puja	1	500
21. Amta Bandar	Jany.	*Māgh*	Pir Sahib Mela	1	—
22. Khardaha	April	*Chaitra*	Chaitra Sankranti	1	300
23. Singti Bazar	June-July	*Āshāḍh*	Rathajatra	1	300
24. Sibpur	April	*Chaitra*	Chaitra Sankranti	1	300
25. Singti	Jany.	*Poush*	Poush Sankranti	1	—
Bagnan P.S.					
1. Deulgram	June-July	*Āshāḍh*	Rathajatra	7	3,000
2. Kalyanpur	April	*Chaitra*	Gajan	1	2,000
3. Birampur	August	*Bhādra*	Kali Puja	1	4,000
4. Bainan Bazar	June-July	*Āshāḍh*	Rathajatra	2	2,000
5. Ditto	April	*Chaitra*	Gajan	1	2,000
6. Baidyanathpur	,,	,,	,,	1	3,000
7. Bhuira	,,	,,	,,	1	1,500
8. Ditto	June-July	*Āshāḍh*	Rathajatra	2	3,000
9. Bangalpur	,,	,,	,,	1	3,000
10. Harop	April	*Chaitra*	Charak	1	2,000
11. Kalibari	,,	,,	Gajan	1	500
12. Mellak	Feb.-Mar.	*Phālgun*	Doljatra	1	1,000
13. Pepullyan	April	*Chaitra*	Nil Puja	1	1,000
14. Khanjadapur	June-July	*Āshāḍh*	Rathajatra	1	1,000
15. Orphuli	April-May	*Baisākh*	Ram Navami	2	—
16. Naupala	April	*Chaitra*	Charak	1	—
17. Khadinan	,,	,,	,,	1	—
18. Bagnan	June-July	*Āshāḍh*	Rathajatra	2	—
19. Khalore	Dec.-Jany.	*Poush*	Poush Kali Mela	1	—
20. Bagnan Mahakali Temple	Sept.	*Bhādra*	Tal Kali Mela	1	—
21. Khalore	Oct.-Nov.	*Kārtik*	Kali Puja	1	2,500
22. Ditto	Feb.-Mar.	*Phālgun*	Doljatra	1	3,000
Baly P.S.					
1. Baly Temple Road	Nov.	*Agrahāyaṇ*	Rashjatra	7	5,000
2. Baly	,,	,,	,,	7	5,000

FAIRS AND MELAS—*contd.*

Place of occurrence	Month of Occurrence		Religious or other occasion	Duration (No. of days)	Attendance (Approx.)
	English Calendar	Bengali Calendar			
Baly P.S.—*contd.*					
3. Baly	April-May	*Baisākh*	Ram Navami	7	1,000
4. Ditto	June-July	*Āshāḍh*	Rathajatra	10	500
Bantra P.S.					
1. Belgachia	June-July	*Āshāḍh*	Rathajatra	1	200
Bauria P.S.					
1. Fort Gloster	Sept.-Oct.	*Āswin*	Durga Puja	1	3,000
2. Raghudeb Bati	April	*Chaitra*	Charak	1	—
3. Burikhali	,,	,,	,,	1	—
Domjur P.S.					
1. Makardah	March	*Phālgun*	Doljatra	15	700
2. Mahiari	Nov.	*Agrahāyaṇ*	Rashjatra	/	5,000
3. Ditto	June-July	*Āshāḍh*	Rathajatra	2	—
4. Narna	April	*Chaitra*	Charak Puja	3	3,000
5. Gayespur	Jany.	*Māgh*	Gyasuddin Sahib Mela	15	1,000
6. Ditto	Jany.-Feb.	,,	Ganesh Puja	8	—
7. Pakuria	April	*Chaitra*	Chaitra Sankranti	2	1,000
8. Kankurhati	,,	*Baisākh*	Ram Raja Mela	3	—
9. Jhaparda	June-July	*Āshāḍh*	Rathajatra	2	—
Golabari P.S.					
1. Salkia	Feb	*Phālgun*	Snanjatra of Sitala	1	5,000
Howrah P.S.					
1. Howrah Maidan	June-July	*Āshāḍh*	Rathajatra	1	10,000
2. Ditto	,,	,,	Punarjatra	1	10,000
Jagachha P.S.					
1. Dasnagar	Sept.-Oct.	*Bhādra-Āswin*	Janmastami	35	1,000
2 Sampur	Aug.-Sept.	,,	..	15	1,000
Jagatballavpur P.S.					
1. Manikpur	Jany	*Māgh*	Manikpir Mela	4	600
2. Bamunpara	,,	,,	Fateh Ali Pir Mela	10	500
3. Munshihat	,,	,,	,,	15	1,000
4. Ditto	June-July	*Āshāḍh*	Rathajatra	2	—
5. Nij Balia	Jany.	*Māgh*	Singhabahini Mela	15	200
6. Siddeswar Mela	Feb.-Mar.	*Phālgun*	Shivaratri	7	800
7. Naskarpur	Jany.	*Māgh*	Hari Seva Mela	4	300
8. Ditto	March	*Chaitra*	Rash Purnima	2	400
9. Jagatballavpur	June-July	*Āshāḍh*	Rathajatra	2	—
10. Bargachhia	March	*Chaitra*	Bikash Mela	4	1,000
11. Patihal	Feb.-March	*Phālgun*	Doljatra	1	—
Mallpanchghara P.S.					
1. Jaladhari Park	November	*Kārttik-Agrahāyaṇ*	Dasamahavidya Puja	17	1,000
Panchla P.S.					
1. Jaynagar	Feb.-March	*Phālgun*	Doljatra	15	700

FAIRS AND MELAS—*contd.*

Place of occurrence	Month of Occurrence: English Calendar	Month of Occurrence: Bengali Calendar	Religious or other occasion	Duration (No. of days)	Attendance (Approx.)
Panchla P.S.—*contd.*					
2. Deulpur	Feb.-March	*Phālgun*	Doljatra	15	400
3. Beldubi	April	*Chaitra*	Charak	1	-
4. Deulpur	June-July	*Āshāḍh*	Rathajatra	2	-
5. Sadananda Bati	Jany.-Feb.	*Māgh*	Safrid Sahib Mela	1	-
Sankrail P.S.					
1. Betiari	April	*Chaitra*	Charak	1	--
2. Duilya	"	"	"	1	--
3. Ratanpur	"	"	Chaitra Sankranti	2	-
4. Rajganj	June-July	*Āshāḍh*	Rathajatra	2	—
Syampur P.S.					
1. Ratanpur	April	*Chaitra*	Gajan	2	2,000
2. Dewantola	Oct.-Nov.	*Kārttik*	Annapurna Puja	4	—
3. "	November	*Agrahāyaṇ*	Ras Puja	8	300
4. "	January	*Poush*	Poush Sankranti	4	5,000
5. Chilara	"	"	"	4	500
6. Baganda	Feb.-March	*Phālgun*	Shivaratri	1	300
7. Katakhola	April	*Chaitra*	Manasa Puja	1	100
8. Gohalpara	"	"	Panchananda Puja	1	400
9. Ulughata	June-July	*Āshāḍh*	Rathajatra	2	200
10. Dewantola	Jany.	*Māgh*	Dewan Sahib Mela	1	1,000
11. Goalberia	April-May	*Baisākh*	Baisakhi Purnima	1	200
12. Nabagram	June-July	*Āshāḍh*	Rathajatra	2	200
13. "	Feb.-March	*Phālgun*	Shivaratri	2	—
14. Deshantola	Feb.	"	Sitala Puja	8	---
15. Nashkarpur	April	*Chaitra*	Bishalakshi Puja	1	2,000
16. Gobindapur	June-July	*Āshāḍh*	Rathajatra	8	--
17. Radhanagar	April-May	*Baisākh*	Akshay Tritia	1	400
18. Radhapur	Feb.-March	*Phālgun*	Bhim Ekadashi	15	1,000
19. "	Mar.-April	*Chaitra*	Shiva Durga Mela	2	--
20. Kamalpur	Jany.-Feb.	*Māgh*	Saraswati Puja	6	---
21. Sayapur	April	*Chaitra*	Sitala Puja	10	1,000
22. Dingakhola	June	*Āshāḍh*	Ganga Puja	5	—
23. "	March	*Phālgun*	"	4	500
24. Sibganj	June	*Āshāḍh*	"	4	500
25. Kalidaha	June-July	"	Rathajatra	8	400
26. Naul	March	*Phālgun*	Brahma Puja	6	500
27. Sushali	Jany.	*Poush*	Kali Puja	4	200
28. Nahala	April	*Chaitra*	"	2	200
29. Kaminai	March-April	"	Nil Puja	8	400
30. Dihi Mandalghat	Dec.-Jany.	*Poush*	Maha Kali Puja	8	600
31. Syiabia	Jany.	*Māgh*	Sitala Puja	4	250
32. Bagandah	June-July	*Āshāḍh*	Rathajatra	2	400
33. "	March-April	*Chaitra*	Nil Puja	1	500
34. Bargachhia	June-July	*Āshāḍh*	Ganga Puja	8	1,500
35 "	Jany.	*Poush*	Poush Parban	2	3,000
36. Kharubere	Oct.-Nov.	*Kārttik*	Kali Puja	8	1,000
37. Srikol	March	*Phālgun*	Banamali Puja	1	1,000
38. Kurchiberia	May	*Baisākh*	Baisakhi Sankranti	1	400
39. "	April	*Chaitra*	Panchnanda Puja	2	1,000
40. Kulshikari	June	*Jyaisṭha*	Ram Navami	8	300
41. Syampur	Feb.-March	*Phālgun*	Sitala Puja	15	1,000
42. Sultanpur	"	"	"	5	1,000
43. Ajodhya	March	*Chaitra*	Kali Puja	1	1,000
44. Amarpur	Tuesdays & Saturdays	—	Bari Manasa Puja	1	500
45. Srikol	April-May	*Baisākh*	Kata Sib Puja	1	1,000
46. Ayma	Jany.	*Poush*	Poush Sankranti	2	600
47. Dharmatola	Sept.-Oct.	*Āswin-Kārttik*	Durga Puja	4	1,000

FAIRS AND MELAS—*concld.*

Place of occurrence	Month of Occurrence		Religious or other occasion	Duration (No. of days)	Attendance (Approx.)
	English Calendar	Bengali Calendar			
Syampur P.S.—*contd.*					
48. Anantapur	April	*Chaitra*	Kali Puja	10-15	2,000
49. Desantari	March	*Phālgun*	Sitala Mela	3	—
50. Khirishberia	Feb.-March	„	Sambhu Nath Mela	1	—
51. Beraberia	May-June	*Jyaistha*	Beraberia Mela	1	—
52 Sitapur	Jany.	*Poush*	Poush Sankranti	1	—
Sibpur P.S.					
1. Ramrajatala	April to August	*Chaitra* to *Srāvan*	Ram Raja Thakur Puja	5 months	2,000
2. Botanical Garden	18th to 31st Dec.	*Poush*	X'mas	14	2,000
3. Ditto	1st and 2nd of Jany.	„	New Year's Fair	2	5,000
4. Sibpur	June-July	*Āshāḍh*	Rathajatra	1	3,000
5. Shibpur Ganga Ghat	Jany.-Feb.	*Māgh*	Saraswati Puja	1	4,000
6. Ditto	Sept.-Oct.	*Āswin-Kārttik*	Vijaya	1	10,000
7. Ditto	Oct.-Nov.	„	Kali Puja	1	6,000
8. Buxarah	May-Aug.	*Baisākh to Srāvan*	Naba Nari Puja	4 months	1,500
Uday Narayanpur P.S.					
1. Singti	Jany.	*Poush*	Pir Puja	1	20,000
2. Kansona	Feb.-March	*Phālgun*	Shivaratri	1	5,000
3. Uday Narayanpur	June-July	*Āshāḍh*	Rathajatra	1	5,000
4. Asanda	„	„	„	1	1,000
5. Pariala	„	„	„	1	1,000
6. Kalyanchak	„	„	„	1	1,000
7. Pancharul	„	„	„	1	600
Uluberia P.S.					
1. Uluberia Kalibari	—	—	Ras Purnima	1 month	5,000
2. Jangalbilash-Baniban	Jany.	*Poush-Māgh*	Urs Mela	7	5,000
3. Bir Sibpur	April-May	*Baisākh*	Baisakhi Purnima	2	2,000
4. Tulshigar	Feb.	*Phālgun*	Kali Puja	1	5,000
5. Chandipur	Jany.	*Māgh*	Ganga Puja	2	500
6. Jagadispur	April	*Chaitra*	Charak	1	—
7. Maynapur	„	„	Chaitra Sankranti	2	—
8. Chengail	„	„	Charak	1	—
9. Banitabala	„	„	„	1	—
10. Kamina	„	„	Chaitra Sankranti	2	—
11. Brindavanpur	June-July	*Āshāḍh*	Rathajatra	2	—
12. Naya Chak	„	„	„	2	—
13. Tehatta	„	„	„	2	—
14. Bahirtofa	„	„	„	2	—
15. Selampur	„	„	„	2	—
16. Kotalpara	Jany.-Feb.	*Māgh*	Panchanan Upananda Thakur Mela	1	—
17. Basudebpur	April	*Chaitra*	Charak	1	—

APPENDIX C

LIST OF TRADE UNIONS IN HOWRAH DISTRICT

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
1	4586	28.4.59	Britannia Building and Iron Workers' Union, 60 Kaibarta Para Lane, Salkia, Howrah.	162
2	4595	2.5.59	Eastern Railway Employees' Congress, 3 Heghet Mansion, Howrah.	31,681
3	4686	25.8.59	Rashikal Mazdoor Sabha, Howrah.	314
4	4702	21.9.59	Kasundia Engineering Works Mazdoor Union, 12 Kasundia 2nd Bye Lane, Howrah	81
5	2128	15.1.51	Dazzle Products Employees' Union, 11 Dayaram Naskar Lane, Ghusuri, Howrah.	162
6	2202	4.5 51	Howrah Metal Workers' Union, 12/13 Cowies Ghat Road, Sibpur, Howrah.	736
7	2308	10.11.51	Guest, Keen, Williams Staff Association Howrah, 5 College Road, P.O. Botanical Garden	760
8	2420	14.6.52	Soap Mazdoor Union, 12/13 Cowies Ghat Road, Sibpur, Howrah.	31
9	2450	23.7.52	Hooghly Docking & Engineering Workers' Union, 77 Upen Mitra Lane, Salkia, Howrah.	753
10	2462	16.8.52	Rly. Licensed Porters' Union, 4 Nityadhan Mukherjee Road, Howrah.	757
11	2468	16.8.52	Burn Mazdoor Union, 61 Chintamoni De Road, Howrah.	671
12	4707	24.9.59	Atlas Iron Foundry Employees' Union, 172 Banaras Road, Salkia, Howrah.	123
13	4744	4.12.59	Mather & Platt Ltd. Employees' Association, Ramkrishnapur, Howrah.	46
14	4800	10.2.60	Kadamtala Bazar Byabosayee Samity, Howrah.	87
15	4830	22.3.60	Ludlow Chalkal Employees' Union Howrah.	288
16	4858	21.4.60	Bauria Dokan Karmachari Samitee, Howrah.	15
17	4868	21.4.60	Phonex Rubber Workers' Union, Salkia, Howrah.	47
18	4934	20.6.60	Raymon Engineering Workmen's Union, 182 Belilious Road, Howrah.	610
19	4935	20.6.60	Dragon Iron Workers' Union, 182 Belilious Road, Howrah.	38
20	4947	27.6.60	Bengal Iron Works Sramik Union, 33/1 Hat Lane, Howrah.	41

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
21	4961	27.7.60	B. N. Pachal Mazdoor Union, 182 Belilious Road, Howrah.	154
22	4974	8.8.60	Port Engineering Sramik Union, 61 Chintamoni De Road, Howrah.	585
23	5002	19.9.60	Sankrail Thana Rickshaw Sramik Union, Andul, Howrah.	84
24	5011	21.9.60	Burns Labour Union, 4 Nityadhan Mukherjee Road, Howrah.	608
25	5012	22.9.60	Printing Labour Union, 4 Nityadhan Mukherjee Road, Howrah.	189
26	5035	14.10.60	Howrah Building Mazdoor Sabha, 4 Nityadhan Mukherjee Road, Howrah.	212
27	5036	14.10.60	Railway Godown Workers' Union, 4 Nityadhan Mukherjee Road, Howrah.	244
28	5082	2.12.60	South Eastern Railway Urban Bank Employees' Association, Howrah.	48
29	5147	3.3.61	Anantapur Textile Workers' Union, P.O. Anantapur, Howrah.	815
30	5123	25.1.61	Fort William Jute Mills Sramik Sangha, Howrah.	200
31	5148	3.3.61	Siddeswari Cotton Mills Workers' Union, Anantapur, Howrah.	42
32	5154	17.3.61	Victory Iron Mazdoor Union, Salkia, Howrah.	123
33	5163	21.3.61	Central Lock Factory Employees' Union Bargachia, Howrah.	46
34	5238	17.6.61	Delta Rope Mazdoor Union, 513 G.T. Road (South), Howrah.	64
35	5383	16.11.61	Howrah Zilla Chatkal Mazdoor Union, 4 Nityadhan Mukherjee Road, Howrah.	755
36	5390	24.11.61	Kadamtala Bazar Samity, 1 Narasinha Dutta Road, Howrah.	117
37	5396	6.12.61	Calcutta Howrah Hosiery Employees' Union, Salkia, Howrah.	152
38	5302	17.8.61	Raymon Engg. Workers' Association (Uttar Buxarah), Howrah (Desh Bandhu Colony).	445
39	5398	9.12.61	Sree Ambikapati Mill Mazdoor Sangha, Ghusuri, Howrah.	150
40	5399	9.12.61	Howrah Zilla Handloom Workers' Union, Bantra P.O., Howrah.	145
41	5401	9.12.61	Indian Rubber Manufacturers Employees' Union, Lilloah, Howrah.	448
42	5425	5.1.62	Chemical Industries Corpn. Employees' Union, P-56 Natabar Paul Road, Howrah.	22

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
43	5427	5.1.62	Shalimar Paint Employees' Union, Howrah.	224
44	5474	10.3.62	Calcutta Iron & Engg. Workers' Union, 5 Hazarimal Saha Road, Salkia, Howrah.	66
45	5583	9.7.62	Gloster Cables Employees' Union, Howrah	600
46	5603	28.8.62	Oriental Supply Syndicate Workers' Union, 191/1 Shiv Gopal Banerjee Lane, Ghusuri, Howrah.	80
47	5584	5.4.62	Pauls Engineering Workers' Union, 90 Lower Chitpur Road, Calcutta-7.	21
48	5645	10.12.62	Howrah District Paint & Colour Workers' Union, Belur, Howrah.	41
49	5660	7.1.63	National Ceramic Industries Mazdoor Union, 17 Goswami Para Road, Baly, Howrah.	77
50	5665	11.1 63	Ganges Printing Mazdoor Congress, 286 G.T. Road (S), Howrah.	66
51	5668	11.1.63	Howrah District Small Engineering (Stal Trank) Mazdoor Union, 49, Pilkhana 2nd Lane, Howrah.	120
52	5671	—	Road Transport Mazdoor Union, 286 G.T. Road (S), Howrah.	72
53	5696	12.2.63	G.D. Banerjee Rope Mazdoor Union, 513 G.T. Road (S), Howrah.	24
54	5709	20.2.63	Hooghly Flour Mills Employees' Union, 9 Round Trunk Lane, Ramkrishnapur, Howrah.	114
55	5716	4.3.63	National Hosiery Mills Workers' Union, Dasnagar, Howrah.	23
56	5728	16.3.63	Bengal Flour Mills Employees' Union, 7 Jagat Banerjee Ghat Road, Howrah.	20
57	5720	7.3.63	Hind Coal & Mining Mazdoor Union, Ghusuri, Howrah.	811
58	5737	1.4.63	Howrah Cotton Mills Workers' Union, Brindaban Mullick Lane, Howrah.	250
59	5738	1.4.63	Reform Flour Mills Workers' Union, Ramkrishnapur, Howrah.	101
60	5749	22.4.63	New Asiatic Hosiery Workers' Union, Dasnagar, Howrah.	20
61	5757	14.5.63	Guest, Keen, Williams Employees' Union, 90/2 Bangalpara 2nd Lane, Santragachhi, Howrah.	495
62	5786	8.7.63	M.M.B. & Co. Mazdoor Union, 87 M.C. Ghosh Lane, Howrah.	42
63	5830	22.8.63	Martin Burn Oil Employees' Union, 4 Nityadhan Mukherjee Road, Howrah.	16

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
64	5836	28.8.63	Howrah Oil Mills Ltd. Mazdoor Union, 93 G.T. Road (S), Howrah.	64
65	5856	19.9.63	K.L. Kapoor & Co. Workers' Union, Salkia, Howrah.	154
66	5878	22.10.63	Jatia Cotton Mills Sramik Union, Mill Corner, Duillya, Howrah.	219
67	5882	22.10.63	Howrah Zilla Dal Mill Mazdoor Sangha, Ghusuri, Howrah.	19
68	5884	22.10.63	Great Eastern Machine House Workers' Union, Salkia, Howrah.	115
69	5892	27.11.63	Biswanath Silver Workers' Union, Dasnagar, Howrah.	48
70	5896	27.11.63	Jugeasalt Rand (India) Pvt. Ltd. Employees' Union, 513 G. T. Road (S), Howrah.	10
71	5918	26.12.63	Shalimar Paint Works Workers Union, 164 Andul Road, Botanical Garden P.O., Howrah.	302
72	5929	4.1.64	Howrah North Engineering Mazdoor Sangha, 119/1 Shiva Gopal Banerjee Lane, Ghusuri, Howrah.	176
73	5948	17.1.64	Hindusthan Electric Employees' Union, Salkia, Howrah.	231
74	5952	22.1.64	Govt. of India Press Workers' Union, "Matri Bhawan", Ramrajatala Road, Santragachhi, Howrah.	350
75	5953	22.1.64	Burn Staff Employees' Congress, Howrah.	82
76	5963	12.2.64	Kedernath Parasotam Das & Co. (P) Ltd. Workers' Union, Ghusuri, Howrah.	92
77	6000	30.3.64	International Wirenetting Stores Mazdoor Union, 12 Kasundia 2nd Bye Lane, Howrah.	43
78	6002	30.3.64	Victory Industries Mazdoor Union, Salkia, Howrah.	32
79	6035	5.6.64	North Howrah Shopkeepers' and Hawkers' Association, Salkia, Howrah.	76
80	6040	19.6.64	Fort Gloster Industries Central Workshop Workmen's Union, Howrah.	305
81	6050	29.6.64	Bharat Plastic Workers' Union, Ghusuri, Howrah (Naskar Para Road).	52
82	6059	14.7.64	K. P. Dass & Co. Workers' Union, 144 Netaji Subhas Road, Howrah.	79
83	6072	20.7.64	Shalimar Works Ltd. Mazdoor Union, 164 Andul Road, Botanical Garden P.O., Howrah.	302
84	6073	23.7.64	National Casting Workers' Union, 56/2B Ram Mohan Mukherjee Lane, Sibpur, Howrah.	154

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
85	6092	13.8.64	Basant Pran Workers' Union, 164 Andul Road, Botanical Garden P.O., Howrah.	106
86	6115	11.9.64	Shibpur Co-operative Bank Ltd. Employees' Association, 173 Sibpur Road, Howrah.	22
87	6116	11.9.64	Lalit Link Chains (P) Ltd. Mazdoor Union, 164 Andul Road, Botanical Garden P.O., Howrah.	61
88	6121	16.9.64	Agarwal Industries Mazdoor Union, 21 Belur Road, Lilluah, Howrah.	201
89	6131	22.9.64	Nathulal Giridharilal Workers' Union, Dasnagar, Howrah.	60
90	6140	25.9.64	Challenge Engineering Workers' Union, Ghusuri, Howrah.	173
91	6143	8.10.64	Hind Plastic Mazdoor Union, Baly, Howrah	25
92	6151	23.10.64	Pioneer Iron & Steel Corporation Karmachari Sangha, Belurmath. Howrah.	150
93	6152	23.10.64	R.B.S. Rubber Mills Sramik Union, Lilluah, Howrah.	125
94	6156	27.10.64	H.L.M. Workers Adarsha Mazdoor Union, Belurmath, Howrah.	172
95	6162	9.11.64	Thisa Workers' Union, 65/1 Kalachand Mondy Lane, Howrah.	60
96	6177	30.11.64	Cromelite India (P) Ltd. Workers' Union, Salkia, Howrah.	185
97	6189	16.12.64	Shalimar Iron & Steel Industries Mazdoor Union, Botanical Garden P.O., Howrah.	50
98	6190	16.12.64	J. D. Jones Workmen's Union, Botanical Garden P.O., Howrah.	80
99	6192	28.12.64	Tata Fison Workers' Union, 9 Naskar Para Road, Ghusuri, Howrah.	62
100	6210	9.2.65	Asiatic Oxygen Workers' Congress, Bengal Jute Mills Cooly Line, Sibpur, Howrah.	156
101	6237	[illegible] 3.65	National Casting Co. Sramik Union, Sibpur, Howrah.	27
102	6257	29.3.65	Howrah Shilpa Pratisthan Workmen's Union, Botanical Garden P.O., Howrah.	152
103	6272	10.4.65	Asiatic Oxygen Workmen's Union, 164 Andul Road, Botanical Garden P.O., Howrah.	105
104	6280	22.4.65	D. N. Singha Mazdoor Union, G.T. Road (S), Howrah.	125
105	6282	22.4.65	Gelde Steel Corporation (P) Ltd. Workers' Union, Belurmath, Howrah.	100

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
106	6283	22.4.65	West Bengal Plastics (P) Ltd. and Bharat Plastic Ltd. Employees' Association, Lilluah, Howrah.	68
107	6311	27.5.65	B.D.P.W. Mazdoor Union, Salkia, Howrah.	15
108	6322	18 6.65	B. K. Mullick & Sons Mazdoor Union, 93 G.T. Road (S), Howrah.	18
109	6324	18.6.65	N. Bhandari Sramik Union, Santragachhi, Howrah.	38
110	6342	26.7.65	Binani Metal Mazdoor Union, Botanical Garden P.O., Howrah.	151
111	6350	29.7.65	Uluberia Sub Dvn. Motor Transport Workers' Union, Bagnan Congress Office, P.O. Bagnan, Howrah.	104
112	6355	12.8.65	Parui Workers' Union, Howrah.	50
113	6359	17.8.65	Allied Transport Co. Employees' Union, Sibpur, Howrah.	16
114	6360	17.8.65	Parbati Cold Storage Sramik Union, Sibpur. Howrah	16
115	6362	23.8.65	City Engineering Workers' Union, 164 Andul Road, Howrah.	124
116	6363	23.8 65	Shalimar Steel Workers' Union, Botanical Garden P.O., Howrah	45
117	* 6364	23.8.65	Caventry Spring Mazdoor Congress, Howrah.	166
118	6383	8.9.65	Gladstone Lyall Workmen Union, Salkia, Howrah.	36
119	6390	15 9.65	Andul Mouri Silk & Cotton Mill Sramik Union, Mashila, P.O. & Vill Andul-Mouri, Howrah.	51
120	225	4.8.38	Engineering Mazdoor Sabha, 4 Nityadhan Mukherjee Road, Howrah	1,089
121	437	5.3.43	Bengal Aluminium Workers' Union, 84 Lala Babu Shire Road, P.O. Belur, Howrah.	567
122	562	30.8.44	Guest, Keen, Williams Mazdoor Union, Howrah.	1,486
123	640	21.3.45	Rly. Press Workers' Union, 179/36 Tandal Bazar Rly. Colony, Howrah.	851
124	642	21.3.45	Howrah Jalkal Karmachary Sangha, Howrah Water Works, Serampur, Hooghly.	94
125	676	20.9.45	Belur Iron & Steel Workers' Union, 80 Dewanganj Road, Baly, Howrah.	..
126	923	12.12.46	Burn Employees' Union, 8 Nityadhan Mukherjee Road, Howrah.	1,247
127	1004	18.3.47	Fort William Jute Mills Employees' Union, 17 Sibpur Road, Howrah.	77

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*contd.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
128	1105	7.7.47	Swalka Mazdoor Union, Lilluah, Howrah.	217
129	1171	14.11.47	Howrah Jute Mill Karmachary Sangha, 73 Atindra Mukherjee Lane, Sibpur, Howrah.	622
130	1221	6.12.47	Howrah Municipal Employees' Association, C/o. Howrah Municipal Office, Howrah.	2,251
131	1249	22.12.47	Shalimar Works Clerks' Union, 49 Kali Nath Chatterjee Lane, Sibpur, Howrah.	82
132	1368	23.2.48	Kadamtala Bus Workers' Union, 151 Nara Sinha Dutta Road, Howrah.	215
133	1735	17.1.49	Indian Aluminium Belur Works Employees' Union, 371/21 G.T. Road, Belurmath, Howrah.	1,043
134	1863	26.5.49	Shalimar Works Sramik Union, 164 Andul Road, Howrah.	305
135	1915	24.8.49	Howrah Municipal Karmachary Sangha, 4 Mahatma Gandhi Road, Howrah.	259
136	2577	10.11.52	Howrah Glass Mazdoor Union, 12/13 Cowies Ghat Road, Sibpur, Howrah.	..
137	2587	10.11.52	Bhattacharya Brothers Engineering Workers' Union, 19/1 Naskar Para Lane, Sibpur, Howrah.	182
138	2624	25.11.52	Thakurdas Sureka Iron Foundry Sramik Union, 20/2 Guho Road, Ghusuri, Howrah.	535
139	2630	4.12.52	Iron & Steel Workmen's Union, 172 Banaras Road, Salkia, Howrah.	599
140	2679	31.1.53	Light Rly. Employees' Union, Howrah Maidan, Railway Station, Howrah.	476
141	2699	14.2.53	Jatia Cotton Mills Mazdoor Union, Mourigram. P. O. Andul-Mouri, Howrah.	168
142	2723	16.3.53	India Machinery Mazdoor Union, 87 M.C. Ghosh Lane, Howrah.	502
143	2773	2.5.53	Rajganj Chatkal Mazdoor Union, Banipur Road, Howrah.	745
144	2875	17.8.53	Lawrence Premchand Chatkal Mazdoor Union, Chackasi, Howrah.	1,732
145	2922	10.10.53	Bridge & Roof Employees' Union, 14 Ramlal Mukherjee Lane, Salkia, Howrah.	240
146	2967	16.12.53	Hooghly Dock Employees' Union, 22 Nandalal Mitra Lane, Salkia, Howrah.	250
147	2995	26.12.53	A.J. Men Workers' Union, 164 Andul Road, P.O. Botanical Garden, Howrah.	271
148	3061	25.3.54	Shankey Electrical Stamping Employees' Union, 4 Duke Road, Howrah.	275

LIST OF TRADE UNIONS IN HOWRAH DISTRICT—*concld.*

Sl. No.	Regd. No.	Date of Registration	Name & Address of the Union	Membership
149	3070	15.4.64	Hooghly Ink Company Employees' Union, 60 Kaibarta Para Lane, Salkia, Howrah.	40
150	3092	25.5.54	Eastern Rly. Men's Congress, 6 Church Road, Howrah.	60,673
151	3191	28.8.54	Howrah Small Factories Workers' Union, 144 N. S. Road, Howrah.	2,553
152	3287	12.1.55	Central Howrah United Engineering Workers' Union, 101/3A Brindaban Mullick Lane, Kadamtala, Howrah.	215
153	3404	25.5.55	Burn Sramik Union, 93 G.T. Road (South), Howrah.	3,527
154	3416	6.5.55	Domjur Bus Workers' Union, 151 Nara Sinha Dutta Road, Howrah.	56
155	3448	12.11.55	South Eastern Rly. Men's Congress, 6 Church Road, Howrah.	36,143
156	3641	17.2.56	West Bengal Boat Building & Repairing Workers' Union, 60 Kaibarta Para Lane, Salkia, Howrah.	21
157	3660	22.3.56	Bauria Cottou Mills Employees' Union, P.O. Bauria, Howrah.	109
158	3778	4.7.56	Delta Jute Mills Mazdoor Union, P.O. Delta Mill, Manikpur-Vill., Howrah.	447
159	3781	4.7.56	Howrah Powro Karmachari Panchayet, Howrah Municipal Office, Howrah.	101
160	3952	20.12.56	Paschim Banga Pantile O Int Sramik Union, Mahiari, P.O. Andul-Mouri, Howrah	240
161	4046	3.5.57	Federation of Martin Burn & Associated Companies Workmen's Union, 4 Nityadhan Mukherjee Road, Howrah.	4,046
162	4101	16.7.57	West Bengal Pharmacists' Union 591 G.T. Road, Howrah.	70
163	4146	5.9.57	Plastic Moulders Workers' Union, 59, Girish Ghose Road, Belur, Howrah.	82
164	4209	20.12.57	Howrah Zilla Balti Sramik Union, 3 Goswami Para Road, Baly, Howrah.	98
165	4290	19.2.58	Victoria Cotton Mills Mazdoor Union, 7 Dayaram Naskar Lane. Ghusuri, Howrah.	520
166	4294	21.2.58	Central Cotton Mills Mazdoor Union, 5 Hazari Mall Saha Road, Salkia, Howrah.	174
167	4302	6.3.58	All Bengal Flour Mills Workers' Union, 63/1 Kali Banerjee Lane, Howrah.	238
168	4499	2.1.59	Central Cotton Mills Workmen Union, 7 Dayaram Naskar Lane, Ghusuri, Howrah.	633
169	4506	21.1.59	Howrah Zilla Bus Karmi Parishad, 4/1 Babu Muktaram Debnath Lane, Santragachhi, Howrah.	60
170	4509	21.2.59	Sree Ambika Jute Mills Mazdoor Union, 7 Dayaram Naskar Lane, Howrah.	163
171	4536	19.2.59	Arati Cotton Mill Mazdoor Union, 87 M. C. Ghosh Lane, Howrah.	312
172	4543	5.3.59	Every Co. Ltd. Employees' Union. 43 Baikuntha Chatterjee Lane, Howrah.	226

CHAPTER VII

COMMUNICATIONS

Old Time Trade Routes and Highways and Modes of Conveyance

The history of old time trade routes and highways and modes of conveyance within the Howrah district, prior to the advent of European merchant adventurers, is practically unknown, and any attempt to piece it together must necessarily be conjectural. It may, however, be assumed that it was a hinterland of Tamralipti (Tamluk), the famous ancient sea port of Eastern India, often mentioned in the *Mahābhārata*, in the old scriptures of the Jains and in Ptolemy's geography.[1] Although there is no specific information about the road network in this hinterland, it may not be wrong to surmise the existence of at least a few arterial waterways and feeder highways there to sustain the busy port. The principal means of communication in the immediate neighbourhood of the port were probably the waterways and the routes which were presumably followed by the Palas, the Senas and the Cholas in their expeditions. Long after Tamluk on the western fringe of the tract had declined, Betor on its eastern fringe emerged as an important port.

Betor or *Vetadda* (in Sanskrit) must have attained sufficient importance even before the 12th century as a *chaturaka* or subdivision bore its name. The Govindapur grant of Lakshmanasena contains the earliest reference to Betor as Vetaddachaturaka which probably denoted the entire Bhagirathi-Saraswati inter-riverine plain. The Saraswati must have been the main channel of the Ganges at that time and the settlement was located at the confluence of the former and the present channels of the Bhagirathi as may be observed from old European maps. Its commanding position on the lower main channel of the river must have enhanced its importance as a sub-

[1] Tamluk is not within the present Howrah district. However, Mandalghat on the left bank of the Rupnarayan opposite Tamluk must have been an important place, for it gave its name to the *pargana*, while the Damodar was often called Mandalghat river, for example, in the pilot chart of 1703. Mandalghat appears in the Ain-i-Akbari as a *mahāl* of sarkar Mandaran and is mentioned by Valentijn who says: "Calcutta, Mondelghat and some other places below, supply most of the wax and hemp that we require." It has been mentioned in Chapter II on History that Bachhari, Khajuri, Harinarayanpur and Mugkalyan (in the Syampur and Bagnan police stations respectively which are very close to Tamluk), are most probably ruined urban habitations. Furthermore, within the Howrah district there were a few inland ports, for example, on the Madaria-Banspati khal, which is an old course of the Damodar, there is a place still called Jahajghata (i.e. anchorage for ships) in the vicinity of Gobardhanpur, one and a half miles from Bagnan The 'anchorage' was most probably constructed during the time of Maharaja Pratapaditya. The proximity of Bhurisrestha is another proof of a flourishing hinterland.

divisional centre and later on as a subsidiary port of Satgaon, an entrepot of European trade. It may, at this stage of its growth, be compared favourably with the European settlements of the Middle Ages,[1] for Betor at that time was more than a mere place of refuge for the surrounding rural populace. The two distinct functional characters raised it above ordinary rural settlements. Caesar Frederick in 1575 mentioned Betor as a subsidiary port to Satgaon and referred to the deeper channel flanking Betor up to which the bigger sea-going vessels could sail.[2] It was also marked in maps of Jao de Barros (1552-1613) and Blaev (1645-50), but not in Van den Broucke's (1660) or later maps. With the decline of Betor, Tanna, Sankrail and Uluberia successively came into prominence. Sankrail was "mentioned by W. Schouten in 1664, by Charnock in his diary dated August 24th, 1690, and by Sir John Goldsborough under the form 'Sea Crowle' in 1693; and it also appears in Rennel's Atlas (Plates VII and XIX). The only event, however, of historical interest attaching to it is that in 1715 the Portuguese seized a British vessel in the Sankrail Reach."[3] Uluberia was an important nodal point "for pilgrims passed through it on their way to and from Jagannath."[4] In fact, before founding Calcutta, Charnock had decided to settle in Uluberia and the Court of Directors had also approved of the scheme on August 27, 1688 in the following terms: "We hope you may so manage that place or Town of Ullaberreah which you have articled for, that may in time become a famous and well governed English Colony."[5] It is interesting to note that Uluberia was referred to as a town. All the early maps show "below the present Uluberia a place named Pisacol, which may have given its name to *pargana* 'Pechacolly' on the other side of the river, i.e., one of the original 24 Parganas. There is no trace of this village in the maps published after the middle of the 17th century."[6]

"During the period preceding British rule", write O'Malley and Chakravarti, "roads in the modern sense of the word appear to have been unknown in the district. The earliest existing European map showing roads in Bengal, viz., that of Valentijn (published in 1726, but based on data gathered by Matheus Broucke, the Dutch Governor of Chinsura from 1658 to 1664) shows not a single road in this part of the delta. Nor is this to be wondered at, for, the country being intersected by rivers, creeks, and channels, the waterways then as now furnished a natural and easy means of transit. The river Hooghly formed the great highway of commerce. It was used by boats and

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[1] E. E. Muntz—Urban Sociology. New York, 1938. p. 36.
[2] R. Hakluyt—The Principal Navigation, Voyages, Traffiques and Discoveries etc. Edinburgh, 1889. Vol. IX. pp. 261-62.
[3] L. S. S. O'Malley and M. Chakravarti—op. cit. p. 172.
[4] ibid. p. 177.
[5] ibid. p. 178.
[6] ibid. p. 179.

small ships, and had on its banks several important *hats* or markets, to which grain, cloth and other merchandise were brought by coolies or pack-bullocks from the neighbouring villages and by small boats from the interior. Here there is a network of channels, among which the Saraswati, the Kana, the Damodar and the Rupnarayan served as tributaries to the Hooghly, while the smaller creeks were their sub-tributaries. In the rains, moreover, when the low lands are turned into wide sheets of water, the villagers moved from place to place in tiny skiffs (*saltis*). On the cessation of the rains there was access from one village to another along the footpaths formed by the passage of men and cattle over the low ridges bounding the fields. Vehicular traffic was a luxury rather than necessity. Horses were used chiefly by Muhammadans and up-country men. Ladies were borne in closed doolies, while men of position travelled in *sukhasans*,[1] i.e., long litters carried by Goalas, Bagdis or Bauris. The cultivators and others rarely left the neighbourhood of their villages, except to go to the nearest marts; and long journeys were even rarer, being confined almost entirely to visits to the holy Ganges on festival days."[2]

In the early days of British administration several important roads appear to have served the area now comprising the Howrah district. Rennell's Atlas, Plate VII (A.D. 1779), shows Salkia as a nodal point from which four roads radiated. One ran along the river bank to Baly, Serampore and further north; a second passed *via* Aubinagar, Chanditala and Dhaniakhali to Burdwan; a third proceeded due west to Makardaha and Rajapur, and thence north-west to Rajbalhat and Bankura; the fourth connected Salkia with Tanna fort, and turned west to Sankrail and Amta, where it bifurcated, one branch going to Ghatal and Khirpai, and the other south-west to Midnapur. A fifth road is shown running from Uluberia *via* Bagnan and terminating at Mankur on the Amta-Midnapur road. Another road from the north joined Dhaniakhali with Amta and Bagnan, and crossing the river Rupnarayan ended at Tamluk. There were no highways south of the Uluberia-Bagnan road, and all those shown in the atlas were apparently unmetalled fair-weather ones.

"By the middle of the nineteenth century a great change had been effected. There were four roads known as Imperial roads, i.e., roads borne on the books of the Public Works Departments and repaired by that Department, and a number of others, called local roads, under the control of the local officers. Of the Imperial roads the oldest was the Old Benares Road, called Ahalya Bai's Road, because it was

[1] *Ain-i-Akbari*, Jarrett, II, 122. "This is a crescent-shaped litter covered with camlet or scarlet cloth and the like, the two sides of which have fastenings of various metals, and a pole supporting it is attached by means of iron hooks. It is conveniently adapted for sitting in, lying at full length, or sleeping during travel. As a protection against sun and rain they provide a commodious covering, which is removable at pleasure." *cf.* Thevenot, III, page 54, and Thomas Bowrey, pp. 86-7, where a rough sketch is given.

[2] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 118-9.

constructed at her cost about 1780 A.D., or the New Military Road, as it was the chief route for troops proceeding to Benares and other stations in the Upper Provinces. Starting from Bandha Ghat in Salkia the Benares Road was a narrow *cutcha-pucka* road extending within the limits of this district as far as the Charial *Khal*, which it crossed by a bridge of six arches. The road was flooded almost every year by the Damodar in Hooghly district, and by 1840 the troops had ceased to use it.[1] The other two were the Grand Trunk Road, having a length of a little more than six miles in the Howrah district, and a branch from Salkia to Baly *Khal*, both metalled throughout. The Grand Trunk Road, which starting from Sibpur joined the main branch at Ghireti near Chandernagore, was begun in 1804, and completed during the administration of Lord William Bentinck. In addition to these roads, the Public Works Department maintained the wide but then unmetalled Orissa Trunk Road from Uluberia to the bank of the Rupnarayan; this section of the road was begun in 1825 and completed by 1829.

"Besides Imperial and Municipal roads there were six local roads, viz., (1) from Howrah to Jagatballabhpur (16 miles), (2) from Jagatballabhpur to Amta (9 miles), (3) from Sibpur to Mahiari (8 miles), (4) from Mahiari to Domjur (4 miles), (5) from Domjur to Jagdispur (6 miles), and (6) from Salkia to Chanditala (10 miles). All these roads were unmetalled but bridged."[2]

The Grand Trunk Road, the Old Benares Road or Ahalyabai Road (also called the New Military Road at that time) and the Cuttack Road (probably constructed by Raja Sukhamoy Ray Bahadur)[3] were strategically and commercially the most important highways of the Howrah district till the railways were opened. They passed through higher grounds and populated localities. Towards the end of the 18th century, with the establishment of dockyards, ropeworks, cotton and jute presses along the Bhagirathi, the riverside began to shed its rural character. By the first quarter of the 19th century, the river bank from Salkia to Sibpur, particularly its middle portion was full of them.[4] The industrial growth continued unabated with the opening of flour and sugar mills, engineering works and warehouses for rice, salt and coal.[5] The docks increased in size and number so much so that in 1848 Howrah was considered to

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[1] A very interesting account of this road will be found in an article entitled 'Routes Old and New, from Lower Bengal up the Country' by C. E. A. W. Oldham in Bengal: Past & Present, Vol. XXVIII, July-September, 1924 and Vol. XXX, 1925-26.

[2] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 118-20.

[3] B. Chatterji—Maharaja Sukhamoy Ray Bahadur and His Family. Calcutta, (undated). pp. 6-7.

[4] Major Schalch's map of 1825, J. B. Tassin's map of 1832 and "The Hooghly River and its West Bank: A Study in Historical Geography" by A. B. Chatterji in the Geographical Review of India, Vol. XXV, No. 3, September 1963, p. 175.

[5] S. Misser's map of 1854.

be "inhabited chiefly by persons connected with docks and shipping."[1]

As regards some of the main roads within the Howrah city, their alignment appears to have been "determined before the eighties of the 18th century as is evident from the map prepared by Mark Wood (1782-83). Parts of the Grand Trunk Road from Ramkrishnapur to Bamangachhi, the Dharamtala Road, Kshetra Mitra Lane and Mukram Kanoria Road in the northern part and the Netaji Subhas Road, the Narasingha Dutta Road and probably the Haldarpara Lane, Jagat Banerjee Lane and the Sibpur Ghat Lane in the southern part, were laid out before that time. Towards the third decade of the 19th century, most of the roads in the newly developed riverside, besides those in the old interior parts, had their lay-outs clearly established

"The marked influence of the river is to be noticed in the lay-out of the Salkia School Road with its extension to the J. N. Mukherjee Road (Old Ghusury Road) in the north, the Upper and Lower Foreshore Road in the south and the Grand Trunk Road further interior. Both the Foreshore Roads, as their names imply, indicate the line of demarcation between the older riverbank and the newly formed sand-banks further east.

"Road transport by trucks and buses started about 30 years ago though transport of passengers by electric tramcars began two decades earlier."[2]

Water transport was more important in the past than land conveyance. In his Memoir of Hindusthan (A.D. 1787), Rennell observed that "considering the very large amount of traffic that is carried on in Bengal, it is no wonder that the inland navigation gives constant employment to thirty thousand boatmen."[3]

Since boats were then the chief means of travel, it would be of interest to note the time taken on river journeys between Calcutta and other important stations in the country in 1781, for which year figures are available. A boat journey from Calcutta to Murshidabad then took 25 days, to Dacca 37½ days, to Malda about the same time, to Chittagong or Patna 60 days, to Banaras or Goalpara 75 days, to Kanpur 90 days and to Fyzabad 105 days.[4] By 1915, however, inland navigation by steamers, inaugurated in the 1820s, was virtually abandoned. Elsewhere rail competition in the upper Ganges districts was found too strong by the steamer companies and at the same time increasing trade with the Barisal district served to divert the remaining traffic into the Sundarbans' route.[5]

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[1] L. S. S. O'Malley and M. Chakravarti--op. cit. pp. 165-6.

[2] A. B. Chatterjee—'The Morphology of Howrah', in Essays in Geography, edited by M. R. Chaudhuri. Calcutta, 1965. p. 57.

[3] Rennell—Memoir of Hindusthan, p. 255.

[4] W. H. Carey—The Good Old Days of Hon'ble John Company, Vol. II p. 15.

[5] C. J. Stevenson Moore and others—op. cit. pp. 62-3.

Government's interest in bridging the streams running across the more important highways and the development of steam navigation were almost simultaneous. "In the Map Department of the India Office", writes C. E. A. W. Oldham,[1] "there is a manuscript 'Plan of the New Road, from Fort William to Chunargur,' without any date on it or the other record to show by whom it was drawn. ... It is drawn to a scale of about 5 miles to an inch, the draughtsmanship being extremely neat. As neither the Semaphore towers nor the 'Shakespearian' bridges mentioned by Herklots in his *Illustrations of the Roads Throughout Bengal* are marked, it seems that the plan is of a date earlier than 1828; the style of drawing also points to this conclusion. It may fairly be assumed that it is an original plan drawn by Captain Charles Rankin who constructed the road (i.e., the Banaras or Old Military Road). Perhaps the most interesting feature of this plan is that it shows no less than seventy 'Raised Causeways' . . . which were no doubt what have sometimes been facetiously described as 'Irish bridges'. ...

"Herklots adds an interesting table of 'Rates of Travelling by Dawk Bearers' i.e., by *palki*, which shows that the rate charged was eight annas (50 paise) per mile.[2] ... Three days' notice had to be given by passengers ... and the control of these arrangements was vested in the Post Office authorities.

"The names of the 'dawk stages' given by Herklots are of much assistance in tracing the exact line of this interesting old road. ... Briefly stated, after crossing the Hooghly between Calcutta and Salkhea, the road ran north-west through Kalipur, practically following the line of the present Howrah-Sheakhala Light Railway, past Sheakhala and Jagjibanpur, crossing the Damodar near Champadanga and the Darkeshvar near Aramnbagh (until 1900 called Jahanabad), and so on *via* Khatul and Kotalpur to Vishnupur. ...

"The roadway was originally 14 ft. broad, and whether it was ever widened to 20 ft. as recommended by the Military Board, is not clear. After Major Playfair's term of control expired in 1828, the condition of the road seems to have deteriorated rapidly. By 1837, we are told, that of 58 bridges within the limits of the Hooghly district[3] only 32 were standing, and 'their arches were being fast worn away. The dak bungalows were out of repair, and the furniture in them was being stolen piece by piece or going to decay.'[4]

"The greatest defect in the alignment of the old military road was

[1] C. E. A. W. Oldham--'Routes Old and New from Lower Bengal up the Country' in Bengal Past and Present. Vol. XXX. Part I, No. 59, July-September, 1925. pp. 18-31.

[2] The 'Palkee Dawk' rates given by Carey in his Good Old Days (Vol. I, Chap. XXXIII), which are more than double the rates given by *Herklots*, apparently refer to the horse *palki* dak.

[3] At that time Howrah and Hooghly comprised a single revenue and administrative district.

[4] L. S. S. O.Malley and M. Chakravarti—op. cit. p. 196.

that between Salkhea and Bankura it ran right across the drainage areas of the Damodar and Dhalkisor (i.e., Dwarakeswar) rivers, and so had to pass over the innumerable channels taking off from these rivers that intersect the low country. Filling up during the rainy season, these channels not only formed serious impediments to traffic, but sudden floods were liable to damage the bridges or wreck the causeways. As early as 1804 steps were taken towards the survey of a new alignment of the road in the direction of Burdwan, *via* Barrackpore and Hooghly, and this ultimately led to the establishment of the first section of the line afterwards adopted for the Grand Trunk Road. W. H. Carey tells us that the road from Calcutta to Barrackpore was opened to the public in July, 1805. Then the portion from Hooghly onwards, *via* Pandua and Bainchi, seems to have been taken up. The first part had been completed before 1820, but it was then in such bad condition that it had to be reconstructed some years later, when it was metalled as far as Magra. ... By 1836 it had been metalled beyond Burdwan. ... Proposals for improving the road communication with the north-west, the whole way from Calcutta to Delhi, seem to have received the close attention of Lord William Bentinck and his Government towards the end of 1831. It is not till then that we see the conception of the Grand Trunk Road taking form, fifty years after Warren Hastings had started work on the New Military Road to Chunargarh. ...

"The first good map of the Grand Trunk Road was published by Charles Joseph in 1855, on a scale of 4 miles-1 inch, entitled 'A New and Improved Map of the First Portion of the Grand Trunk Road from Calcutta to Benares.' It showed all the government staging bungalows, encamping grounds, overseers' road choukey bungalows, horse and dak chaukis, post offices and thanas along the road. ..."

In the first decade of this century, when O'Malley and Chakravarti wrote the old Howrah District Gazetteer, the maintenance of roads had vested in the Public Works Department, the District Board and the municipalities. In 1909 there were three Provincial Roads, all metalled and maintained by the Public Works Department, namely (1) the Grand Trunk Road from Sibpur to Baly 9.6 km. (6 miles), passing through the two municipalities of Howrah and Baly; (2) the Howrah Foreshore Road running parallel to the right bank of the Hooghly from Elliot Bridge to the Royal Botanic Garden 1.6 km. (1 mile) and (3) the Orissa Trunk Road from Uluberia to the left bank of the Rupnarayan river 32.0 km. (20 miles). The South Eastern Railway (then Bengal Nagpur Railway) offered stiff competition to the vehicular traffic on the Orissa Trunk Road.

"All other roads", wrote O'Malley and Chakravarti, "outside municipal areas are kept up by the District Board. In 1907-08, this body had under its charge 40.8 miles of metalled roads, 110.6 miles of unmetalled roads, and 400 miles of village tracks. The more

important roads are metalled, at least in some portions, and the metalled surface, which is generally of stone, occupies 8 feet out of a width of 20 feet, or 7½ feet where the width is less. The more important metalled roads are (1) the Old Benaras Road, from Howrah to Jagdispur, 5 miles 3 furlongs; (2) Howrah to Jagatballabhpur, 15 miles 6 furlongs, of which the first 8 miles are metalled; (3) Domjur to Bauria station, 13 miles 7 furlongs, of which the last mile only is metalled; (4) Domjur to Jagdispur, 4 miles 4 furlongs; (5) Domjur to Mahiari, 3 miles, of which the first half is metalled; (6) Mahiari to Makardaha, 1 mile 7 furlongs; (7) Mahiari to Santragachhi, 4 miles 4 furlongs, of which the last mile only is metalled; (8) Mahiari to Kundu Road, 5 miles 4 furlongs; (9) Andul to Ekabbarpur, 8 miles, of which the first two miles are metalled; (10) Andul to Rajganj, 2 miles.

"There are also a few short lengths of metalled road, viz., (1) Thana Makwa to Goberia, 1 mile 2 furlongs; (2) Makardaha to Begri, 2 miles 4 furlongs; (3) Uluberia town to the railway station, 1 furlong; (4) Liluah station to the Old Benaras Road, 1 mile 1 furlong. Besides these roads twenty unmetalled second class roads are kept up by the District Board, all more or less bridged.

"The Howrah Municipality maintains an extensive network of roads and lanes, all more or less macadamized. In 1907 it kept up 59.5 miles of metalled and 4 miles of unmetalled roads, while in the Bally Municipality there were 18 miles of metalled and 10 miles of unmetalled roads."[1]

It is interesting to note that the East Indian Railway played a large part in the introduction of macadamization of roads in this part of the country. Prior to the use of bitumen as a surface cover for roads, macadamized thoroughfares were constructed with successive layers of broken stone of nearly uniform size, each subjected to pressure with road rollers before the next was laid. Huge quantities of Birbhum gravels required for the purpose were hauled to various destinations by the E. I. Railway.[2] The Grand Trunk Road was, however, reported to be partly metalled in 1848 before the opening of the railways.[3]

ROAD TRANSPORT

In 1928 the Road Development Committee under the chairmanship of M. R. Jayakar called for a change in the road policy and the Government of India responded by setting up in 1929 a Central Road Fund (C.R.F.) with the proceeds of a surcharge on petrol. The C.R.F. enabled the Centre to make annual block grants to the Provinces for subsidizing provincial works on roads. But Bengal had then no development plan worth the name, and this led to the appointment of A. J. King in 1934 as Special Officer for road

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. pp 120-21
[2] G. Toynbee—op. cit. p. 105.
[3] A. B. Chatterjee—op. cit. p. 60.

development. When King surveyed the Howrah district, he found 2,060 miles (3,296 km.) of metalled and unmetalled roads there of various descriptions, the upkeep of which rested with different authorities.

The King Plan

He submitted a plan which envisaged the provision of feeder roads, neglected so far, and the improvement of roads likely to compete with the railways as also an integrated system of communications consisting of four different categories of roads. A classified list of roads in the Howrah district in 1937, incorporated in King's plan,[1] shows that out of a total of 236 miles (377·6 km.) of metalled roads the Communications & Works Department maintained 24 miles (38·4km.), the District Board 70 miles (112 km.), the Municipalities 107 miles (171·2km.) and the Union Boards 35 miles (56 km.). The Government at that time used to spend annually Rs. 3,566 and the District Board Rs. 490 for maintaining each mile of metalled road. Out of 1,824 miles (2,918·4 km.) of unmetalled roads in the district the C & W Department maintained only one mile (1·6 km.), the District Board 237 miles (379·2 km.), the Local Boards 596 miles (953·6 km.), the Municipalities 41 miles (66 km.) and the Union Boards 949 miles (1,518·4 km.). The expenditure in 1936-37 on unmetalled roads was Rs. 52,560 as compared to Rs. 1,21,325 on 236 miles (377·6 km.) of metalled roads in the district. The average annual expenditure per mile of unmetalled road incurred by Government was Rs. 232, by the District Board Rs. 62, by the Local Boards Rs. 29 and by the Union Boards Rs. 22. The municipalities did not furnish King with figures of their costs for maintaining unmetalled roads. King found that Government and District Board roads were the main lines of communication. He made a detailed examination of 98 miles (156·8 km.) of road and 3,998 running feet (1,218·6 m.) of bridging which included 4 major bridges and 380 minor bridges and culverts. Particulars of existing railway bridges in the district were also collected to help examine general drainage conditions and the important question of obstruction to the same caused by the construction of raised embankments. A census of traffic was also taken by actual count on some of the roads in the district representing the several classes into which the road system could be graded according to the volume of traffic carried. King drew up a scheme for constructing 134 miles (214·4 km.) of improved roads in the district consisting of 29 miles (46·4 km.) of existing metalled roads, 35 miles (56 km.) of existing unmetalled roads and 70 miles (112 km.) of new roads. The scheme provided for one mile of road for every 3.9 sq. miles of inhabited area (or for every 8,200 heads of population) and serving approximately 506 sq. miles, representing 97 per cent of the total area of the district. On the assumption that a road, railway or steamer service can serve the country within 5 miles on either side of it, the then

[1] A. J. King—Comprehensive Report on Road Development Projects in Bengal, Volume II. Calcutta, 1938. p. 469.

existing railways and steamer services and the proposed roads would have left only 16 sq. miles of the district untapped. The roads included in this plan are listed below.[1] It would be interesting to note that the scheme provided direct connexion with 11 thana headquarters and the remaining 2 thanas were to be within 5 miles of an improved road.

IMPROVED ROADS IN HOWRAH DISTRICT SUGGESTED IN THE KING PLAN

Alignment		Approximate length		Classification
From	To	miles	km.	
Howrah	Baly	7	11·2	Provincial—Trunk
,,	Baigachi	7	11·2	,, ,,
Baluhati	Uluberia-Kulian Road	27	43·2	,, ,,
Howrah	Domjur	11	17·6	District—Main
Bipra-Nawpara	Wadpur	4	6·4	,, ,,
Bauria	Debandi	14	22·4	Provincial—Trunk
Amta	Sitapur	12	19·2	Inter-district—Main
,,	Palaspai	8	12·8	Provincial—Trunk
Bagnan	Kankrol	12	19·2	District—Main
Uluberia	Raghudebpur	6	9·6	,, ,,
,,	Kulian	9	14·4	,, ,,
Bagnan	Syampur	13	20·8	,, ,,
Sultanpur	Jhunjhumi	4	6·4	District—Secondary
Total:		134	214·4	

The exigencies of the Second World War necessitated the construction of modern strategic roads. By the time the hostilities ceased, some roads acquired improved surfaces while others remained neglected. Meanwhile, in 1941-42 the Government of India had frozen the C.R.F. and in 1943 convened the famous Nagpur Conference to formulate a co-ordinated road policy for the whole country. The Nagpur Plan envisaged the construction of three categories of roads—national, provincial and local. The national highways were to carry uninterrupted road traffic across the States, the provincial roads were to serve as the main arteries of trade, commerce and administration while the local roads were to be of two types, namely the District Roads and the Village Roads, the former branching off from the National and State Highways and lying within 2 to 5 miles (3·2 to 8 km.) of important villages while the latter were to be the outer link of this network connecting isolated rural settlements. This is the standard classification of roads all over India today. The King's report had to be modified in the light of the recommendations of the Nagpur conference and the Union Government finalized a plan which envisaged the construction and improvement of roads for a period of

The Nagpur Plan

[1] A. J. King—op. cit. p. 471.

20 years beginning from 1946-47. The schedule of priorities was also modified. The new scheme improved upon the King Plan by making provision for village roads and considering the railways as complementary to the highways.

Work on these lines commenced in 1948 but the whole scheme was reviewed again by the Planning Commission and the following road building specifications were laid down in 1951: National and State Highways were to have 32 feet (9·8 m.) wide embankments and 12 feet (3·7 m.) wide metalled crust (water-bound consolidated surfaced dressed with bitumen or 1" to 2" pre-mixed 'carpet' and 4" cement concrete according to the nature and load of local traffic); curves and crossings were to bear an average speed of 40 to 50 miles per hour outside urban limits; sufficient roadside land was to be kept on either side for future widening. The District Roads were to be similar to the State Highways in all respects except that the embankments' width was to be 24 feet only. The Village Roads were to have 16 feet (4·9 m.) embankments and would remain *cutcha* or be provided with either cement concrete or brick trackways and improved culverts so that they might serve as fair weather roads. During the first two Plans the district made no significant progress in the construction of roads. The table[1] below shows the mileage of roads in the Howrah district maintained by the Government and local bodies. The emphasis during the First Plan was on the maintenance of the existing roads, in the Second on extending the network to connect all the thana headquarters, during the Third on construction of the major bridges and roads of proper standards as also on linking villages, while in the Fourth the basic objectives have been recast on the basis of the National Road Development Programme (covering a 20-year period from 1961 to 1981) adopted at the All-India Chief Engineers' Conference held in Shillong in 1957. (The subsequent recommendations made by the Calcutta Metropolitan Planning Organization in the West Bengal Transport Survey Report of 1965 may also influence Government policy).

MILEAGE OF ROADS IN HOWRAH DISTRICT MAINTAINED BY THE GOVERNMENT AND LOCAL BODIES

Year	Roads maintained by the P W. Department	Municipal roads maintained by the District Board (including village roads)	Roads maintained by the Municipalities
1948	28.9 M	74.9 M & 966.4 U	124.7 M & 42.8 U
1956	28.7 M	51 M & 937 U	134 M & 40 U
1961	77.4 M	36 M & 925 U	141 M & 36 U

('M' denotes metalled and 'U' unmetalled road surfaces).

[1] Source: Statistical Abstract of West Bengal for 1951, 1956 and 1961.

In 1951, when the First Plan commenced, there were 355 village roads in the district which were mostly *cutcha*. The names and condition of the more important roads besides the village roads which existed in 1962 are given in the following table.[1] Besides these, the District Board maintained (in 1962) 224 roads most of which, according to their own statement, were in a deplorable state.

Class of Road	Name of Road	Length		Width
		Miles	Kilometres	(in metres)
IA	Old Grand Trunk Road	8·0	12·8	15 24
IA	Howrah Foreshore Road	1·0	1·6	N.A.
IIB	Orissa Trunk Road	15·5	24·8	N.A.
*IA	Howrah to Jagatballavpur	15·75	25 2	4 27
*IA	Old Banaras Road—from Howrah to the boundary of the district near Jagadishpur	5·38	8·6	4·27
*IIB & IB	Jagatballavpur to Amta	10 0	16 0	6·10
IA	Narendrapur to Amta	9·63	15 4	4 57
*IIA & IA	Domjur to Bauria	13 88	22 2	6 10
*IA	Domjur to Jagadishpur	4·63	7 4	4·88
*IA	Domjur to Mahiari	3·38	5 4	4·88
IA	Makardaha to Andul *via* Mahiari	3·25	5·2	4 88
IV	Jagatballavpur to Mashat	1·0	1 6	N.A.
*IA & IIA	Santragachhi-Mahiari Road with a branch to Baksara *via* Santragachhi Ry. Station	5 25	8·4	N.A.
IV	Amta to Khalua *via* Narit (Nyayaratna Road)	8 38	13·4	3 05
IV	Jagatballavpur to Sitapur	0·63	1·0	N.A.
IA	Mahiari to Kendu Road	4 5	7·2	4·88
*IA & IIB	Andul to Ekabbarpur	8·0	12·8	3·66
IB & IIB	Domjur to Kuldanga *via* Jalashi Bowbazar	7·0	11·2	3·05
IIB	Uluberia to Kharuberia *via* Guruchumuk (Duke Road)	12·0	19·2	2·44
IA & III	Bagnan to Khalor	1·25	2 0	2·44
IA	Uluberia Ry. Station to Cuttack Road	0·25	0 4	4·88
*IA	Mahiari to Rajganj *via* Andul Ry. Station (with a branch, N. C. Paul Road, at Rajganj)	3·25	5·2	N.A.

(contd.)

[1] Sources: A. Mitra—Census 1951, West Bengal District Handbooks: Howrah. Calcutta, 1953. pp. 156-8, and the Chairman, Howrah District Board.

Class of Road	Name of Road	Length		Width
		Miles	Kilometres	(in metres)
IB	Thana Makua to Goberia *via* Nazirganj	1·25	2·0	N.A.
IIA	Bankra to Mowkhali	1·5	2·4	N.A.
IB	Makardaha to Begri *via* Biprana-para	2·25	3·6	3·66
IIB	Rajapur to Khasmarah	3.0	4·8	3·66
*IIB & IB	Baragachhia to Sekrahati	3·0	4·8	3·66
*IIB & IB	Munshihat to Basantapur (Ashutosh Road)	4.75	7·6	6·10
*IIB & IB	Amta to Jhinkra	4·75	7·6	6·10
*IA & IIA	Bagnan to Mugkalyan *via* Nuntia Hat (with a branch to Gorachandtola *via* Mugkalyan-Ghosalpara)	4·25	6·8	3·66
IIA	Bagnan to Fatehpur	5·25	8·4	3·66
*IIA	Bagnan to Mankar	5·38	8·6	3·05
IIB	Kantapukur to Mellak *via* Deulti	3·5	5·6	3·05
IIB	Makardaha to Ekshara	5·0	8·0	3·66
IIB	Abada to Ranihati	3·25	5·2	2·44
IIB	Maju to Jagranpur	1·25	2·0	3·05
IA	Lilua to Old Banaras Road	1·25	2·0	3·66
IB	Makardaha to Dagarpur *via* Paruipara	1·5	2·4	3·05
III	Phuleswar to Uluberia	1·0	1·6	1·83
IV	Uluberia (Cuttack Road) to Boaliaghat Road	7·38	11·8	1·52
IIA	Bargachhia (Bargachhia Feeder Road) to Rammahal	3·5	5·6	3·66
IIA	Phuleswar Ry. Station to Uluberia Ry. Station *via* Fater, Keaor and Kotalghata	3·0	4·8	3·66
IIA	Sankrail Ry. Station to Dhula-gore	1·88	3·0	3·66
IIA	Uday Narayanpur to Jangalpara	0·63	1·0	3·66
IIA	Munshihat to Ghoradaha	3·0	4·8	3·66
IIA	Phuleswar Ry. Station to Rajapur Drainage *Khal*	0·5	0·8	1·22
IIB	Mukandadighi to Darmaghata	2·0	3·2	N.A.
IIB	Santragachhi to Kona *via* Baltikuri	2·5	4·0	N.A.

(contd.)

Class of Road	Name of Road	Length		Width
		Miles	Kilometres	(in metres)
IA	Sankrail Ry. Station to Sankrail (extended up to the Role Bridge)	2·0	3·2	3·66
IIB	Uluberia to Katley	2·0	3·2	1·52
IIB	Dhulagore to Deulpur	3·0	4·8	N.A.
*IIB	Nuntia Hat to Kamalpur (Rupnarayan embankment)	14·0	22·4	2·13
IIB	Borda to Protap Chak *via* Debipur, Singti & Dihi Bhursut	13·25	21·2	3·66
IIB	Bauria to Basudebpur (Umesh Chandra Bose Road)	5·0	8·0	1·83
IA & IIB	Vascoor to Narna (with Khanpur branch)	4·5	7·2	3·05
IIB	Bargachhia to Ganjakole *via* Nabagram and Maheswarpur (portion from Bargachhia to Nabagram is named Satish Ch. Dutta Road)	4·0	6·4	1·83
IIB	Bargachhia to Jalasi Bowbazar	5·0	8·0	2·44
*IIB	Syampur to Sibganj	4·0	6·4	1·52
IIB	Syampur to Bauria (Rupnarayan embankment)	5·0	8·0	N.A.
IIB	Mahendra Roy Road to Tajpur Ferry *via* Joypur embankment with two branches	5·5	8·8	1·83
IIB	Jagatballavpur to Khandaghat	4·5	7·2	3·35
IIB	Sasati to Kharuberia	5·0	8·0	1·83
IIB	Chatra to Harishpur with its Chatra branch from the Narendrapur Amta Road	1·25	2·0	1·83
IA	Ramkamal Road (Cuttak Road to Uluberia Ry. Station *via* Natibpur)	4·0	6·4	3·66
IA & IIA, IIB	Lilua to Chakpara *via* Syampur & Sibpur	6·5	10·4	N.A.
IA & IIB	Lilua to Goshala at Lilua	2·0	3·2	4·88
IIB	Gangarampur to Rajapur	2·25	3·6	2·13
IIB	Panchla to Mejuty Road	2·5	4·0	N.A.
IB & IIB	Bankra to Mahlari (Hazi Abdul Huq Road)	3·25	5·2	3·05

(contd.)

Class of Road	Name of Road	Length		Width
		Miles	Kilometres	(in metres)
IIA	Orpnuli to Mellak	3·0	4·8	1·83
IIB	Sijberia to Panchla	6·0	9·6	2·44
IIB	Chengail to Dasbhaga	1·5	2·4	1·83
IIB	Bargachhia to Kamalpur	1·25	2·0	1 52

Note (i) I—Metalled Roads; IA—Metalled, bridged and drained throughout; IB—Metalled, partially bridged and drained; II—Unmetalled Roads; IIA—Unmetalled, bridged and drained throughout; IIB—Unmetalled, partially bridged and drained; III—Banked and surfaced with "Murum" or similar material but not drained; IV—Banked but not surfaced, partially bridged and drained.

(ii) All roads marked with a * sign were, by 1962, wholly or partly, made over to the Government for their maintenance, and some of them, particularly Howrah-Jagatballavpur-Amta Road, Narendrapur-Amta Road, Bargachhia-Sekrahati Road, Munshihat-Basantapur or Ashutosh Road, and Amta-Jhinkra Road, for a total length of about 51 miles were acquired and improved under direct Government control.

(iii) N.A. means 'Not available'.

The Shillong Plan

The Shillong Plan of 1957 improved upon the Nagpur Plan by formulating a more balanced road system with a combination of (1) direct through routes, i.e. expressways, (2) roads for internal communications in specified areas (not much different from what was envisaged in the Nagpur Plan), and (3) boundary roads of the peripheral type for important towns or groups of villages. For working out the mileages, basic factors like area, population, state of present and future development, location of industrial, commercial or service centres, universities, health resorts, tourist spots and the strategic needs of the country were also considered.[1] No systematic work for implementing the recommendations of the Shillong Conference has so far (July 1967) been done in the Howrah district. Even the administrative set up necessary to carry out the Shillong Plan (as suggested in the Masani Committee Report) is not there. Moreover, the staffing pattern in the Transport Ministry at the Centre is reportedly as rudimentary as that at the State level.[2] At their meeting in Bombay in 1959-60, the Chief Engineers of various States evolved a plan for increasing road mileage which was to be implemented in respect of the National, State and District Highways over a 20-year period from 1961 to 1981. The West Bengal Transport Survey Report of 1965 produced by the C.M.P.O. did not work out the "grid and star" formulae of the Shillong Conference for providing a clear blueprint. It appears from the published figures that there is a dire need for evaluating performances, disseminating new ideas and

[1] Report of the Chief Engineers on Road Development Plan for India (1961-81). New Delhi, 1958. p. 3.

[2] Road Transport Re-organization Committee Report 1959. New Delhi, 1959. pp. 9 and 154.

taking stock of the future of road development in the district, the cradle of the largest service node in India.[1]

The 1961-81 transport plan, if faithfully implemented, is, however, likely to bear spectacular results. During the Fourth Five Year Plan the congested road transport system in the Howrah-Baly area is expected to improve considerably. The National Highway 6 (Calcutta-Bombay) has been opened to traffic. The National Highway 2 By-pass under construction between Vivekananda Bridge and Grand Trunk Road near Adi-Saptagram will greatly ease congestion on G.T. Road. The work on the two roads was taken up late in 1962 by the Special Road Organization for a total estimated cost of Rs. 12 crores to be financed partly from the loan assistance received from the International Development Authority.

The interesting special features of these roads are: (*i*) for the first time in India, the embankments are being compacted in layers under field laboratory control and (*ii*) the 1½" bituminous carpet on top is designed in the laboratory and the entire laying out operation is being carried out mechanically. Both the roads, capable of carrying two-lane traffic, have future provisions for expansion to four lanes. There will be four fly-over bridges across the railway tracks on the 40 km. long National Highway 2 By-pass to avoid wastage of time. The Special Road Organization will build only 168 km. of the National Highway 6, stretching from Baly to the Bihar border, 48 km. beyond Kharagpur. A 1,036m. long bridge ('Sarat Setu') on this road spans the Rupnarayan at Kolaghat. The bridge has shortened the Calcutta-Kharagpur route by 80 km. for motorists who had to make a long detour *via* Arambagh. The initial target date for these roads was 1965; the delay is attributed to land acquisition difficulties and uncertainties over import of some machinery.[2]

Work on the construction of subways for buses and pedestrians between the Howrah bridge and the Railway station was to commence in October 1964. It was envisaged that this 350 ft. (106·6m.) long and 48 ft. (14·6m.) broad subway would enable all railway passengers and pedestrians to reach the bus terminus from the railway station without having to travel by the surface road and thus reduce the huge congestion of pedestrian traffic in the area. The scheme, first conceived in

[1] Basic Road Statistics of India, B.R.S.I. Thirteenth (1962) Supplement issued by the Government of India; Delhi, 1965 gives estimated and incomplete figures for West Bengal, *vide* pp. 66-68 and 72. Moreover, districtwise mileages of municipal or extra-municipal roads maintained by the P.W.D. and local bodies could not be obtained. Districtwise break-up of revenues earned from State Motor Vehicle Taxes, Tolls and Sales Tax on petrol and high speed diesel oil is also not available.

[2] The Amrita Bazar Patrika, dated 19.7.66.

The 1965 West Bengal Transport Survey Report published by the C.M.P.O. observed that due to the unfinished bridge on the Rupnarayan, 'a missing link' on the National Highway 6, inter-State goods flow between Orissa and West Bengal is fairly low—only 6 per cent. The importance of the bridge also lies in the fact that it will provide a most vital link between Haldia and the Calcutta port complex.

1956, was finalized after consultations with the Calcutta Port Commission, the Calcutta Improvement Trust, the Railways, the C.M.P.O. and various departments of the State Government as a part of the Rs. 20 crores (provided by the Planning Commission) Greater Calcutta Development Plan. It was to cost Rs. 1.5 crores and the State Government, in its budget for 1964-65, had made a token allotment of over 25 lakhs for its construction. It was then contemplated that with additional funds from the Planning Commission it would be possible to complete the construction within three years.[1]

The Durgapur Express Highway, another important addition to the inter-district road mesh of the Howrah district, was taken up during the Third Five Year Plan. This road connecting Durgapur with Dankuni and Baly runs parallel to the Howrah-Burdwan Chord line and crosses the Grand Trunk Road near Palsit. Polarization of industrial activities at its two ends, namely the Asansol-Chittaranjan-Durgapur complex at one and the Calcutta connurbation at the other, highlights the need for early completion of the Durgapur Expressway.

Traffic and roads within the Howrah city

The construction of a new 40ft. (12·2m.) wide road from Banaras Road (Ahalyabai Road) to Belur Station Road and extension of Durgapur Expressway from Bijoypur point to the western approach of Howrah bridge is an imperative necessity for the industrial units (some 110 in number) of Lilua. There are only two roads at present to reach Lilua—one from the Grand Trunk Road and the other from the Bamangachhi Bridge. A railway level crossing in the case of the former and a narrow one-way lane in the case of the latter are serious bottlenecks to busy industrial traffic on them. The Lilua Industries Association, in a press note dated 13th March 1964, proposed to donate Rs. 45,000 for the widening and improvement of these two roads of Lilua.[2] Howrah city sustains itself through an exchange of goods and services with the surrounding 'Umland' thereby establishing a close functional relationship with the neighbouring country.[3] The pattern of economic activity obtaining in the town is acknowledgedly of the manufacturing-cum-transport type. This bifunctional character is revealed by the fact that manufacturing industries employ 34.44 per cent of the local workers (jute products and hosieries—15.6 per cent, machineries and engineering—8.7 per cent and a variety of other industries the rest) while transportation engages 18.60 per cent of them.[4] The high intensity of transportation activity within the city will be evident from the fact that while in the Greater Calcutta

[1] The Amrita Bazar Patrika, dated 29.6.64.
[2] The Amrita Bazar Patrika, dated 13.3.64.
[3] N. R. Kar—'Calcutta als Weltstadt' in Zum Problem der Weltstadt, Festschrift zum 32. Deutschen Geographentag. Berlin, 1959.
[4] N. R. Kar—'Economic Character of Metropolitan Sphere of Influence of Calcutta' in Geographical Review of India, Vol. XXV, Number 2, June 1963. Calcutta, p. 126.

area only 7.99 per cent of workers are employed in transportation services, the corresponding figure for Howrah town alone is as high as 18.60 per cent.[1] The volume of traffic and the extensive road network in the city, therefore, calls for a special study. Prof. A. B. Chatterjee observed: "by the middle of the 19th century a great change had been effected apparently due to the rail transport, when the construction and macadamizations of various roads, viz., the Local, Municipal and Imperial Roads, were carried on. The work in the city since then seems to have proceeded briskly as could be gauged from the table given below.[2]

MUNICIPAL ROAD LENGTHS

Year	Metalled Miles	Metalled Km.	Unmetalled Miles	Unmetalled Km.	Total Miles	Total Km.
1907-08	59.5	95.2	4.0	6.4	63.5	101.6
1933-34	83.29	133.3	34.29	54.9	117.58	188 2
1954-55	194.73	311.5	16.90	27.0	211.63	338.6

The second and third decades of the present century were conspicuous for the general growth of the city. The road mileage towards the end of the third decade was almost double that of 1907-08. Of the new roads added between 1933-34 and 1954-55, a considerable portion—some 41 miles (65.6 km.) was metalled. The laying out of new road, however, failed to keep pace with the rapid growth of the city. To complicate the problem further, the streets are being called upon to fulfil several other functions as market sites, pedestrian ways and goods storage areas. From the distribution of different kinds of thoroughfares inside the city it is apparent that the metalled and asphalt roads form the main arteries of the town while unmetalled ones serve slum areas like Priya Manna, Jolapara, Peelkhana etc. and some parts of the rural areas in the south, namely Bakultala, South Amtala and West Ramnathpur. The central part of Howrah, besides Central Salkia (wards 3, 5 and 7), has a greater road mileage; it possesses more than double the average for the city as would be evident from the following table.

METALLED AND UNMETALLED ROAD MILEAGE IN HOWRAH CITY: 1965

Wards	Length of metalled roads per sq. mile	Length of unmetalled roads per sq. mile	Total per sq. mile
1	12.20	2.40	14.60
2	10.50	0.60	11.10
3	23.60	0.08	23.68

[1] ibid. p. 124.
[2] A. B. Chatterjee—op. cit. p. 60.

(contd.)

METALLED AND UNMETALLED ROAD MILEAGE IN HOWRAH CITY: 1965—*contd.*

Wards	Length of metalled roads per sq. mile	Length of unmetalled roads per sq. mile	Total per sq. mile
4	11.80	0.20	12.00
5	23.00	1.40	24.40
6	16.70	1.80	18.50
7	23.30	2.90	26.20
8	15.10	0.20	15 30
9	6.00	2.10	8.10
10	3.10	2.40	5.50

It will appear from the above table that ward 7 of the town has the highest mileage of unmetalled roads due to the presence of extensive slum areas on the Grand Trunk Road side of it. Wards 1, 9 and 10 are no better, particularly, the first and the last which have exactly double the average of unmetalled roads for the city. The low density of roads per sq. mile in wards 2, 4, 9 and 10 is due to the open nature of the *jalā* (swampy) areas (in the north and west), the eastern parts of which are, however, well-developed being adjacent to the central built-up areas.

"The nature of the traffic flow inside the city is also interesting. A survey, based on field observations at certain congested traffic-nodes, gives an interesting picture of vehicular traffic at these points during the peak and normal hours respectively. (Table below).[1]

"LOAD OF VEHICULAR TRAFFIC WITHIN HOWRAH CITY: 1965

"Traffic Nodes	No. of Vehicles		Congestion during Peak Hours
	Peak Hours	Normal Hours	
1. Buckland Bridge Approach	350	200	Very heavy
2. Crossing near the Collectorate	225	170	Heavy
3. M. Gandhi Rd. & G.T. Road crossing	250	210	Heavy
4. G.T. Road & N. Subhas Road crossing	275	215	Heavy
5. G.T. Road & Sibpur Road crossing	175	130	Not so heavy
6. G.T. Road & Andul Road crossing	160	105	Not so heavy
7. G.T. Road & Benares Road crossing	200	150	Heavy
8. Haraganj Rd. & J. N. Mukherjee Rd. crossing	250	175	Heavy
9. A. Dutta Rd. & Salkia School Rd. crossing	200	155	Heavy

[1] Ibid. p. 62.

"Of these, the first six are important crossings in the central and southern part while others are in the northern part of the city. ...

"The width and form of the roads in the residential and other areas have changed but little during recent years. In the good residential quarters, usually, the roads are narrow and tortuous, barely allowing one-way traffic at certain points though in the commercial-residential parts, the greater width allow the incoming and outgoing traffic with comparative ease. It is the same in the industrial-residential parts of the Belilios Road, Narasingha Dutta Road and Benares Road areas. Of these the old Bamangachhi bridge on the Benares Road over the main lines of the Eastern Railway, used to form a 'bottle-neck' because of its narrowness through which only one way traffic could proceed before. It was widened in recent years to cope with the increased traffic caused by the development of industries in this part of the city."[1]

The Grand Trunk Road and its extension to the Andul Road form the main artery of the entire length of the central part of the city. For about a mile from its starting point at Sibpur, it passes through residential localities; then it crosses an industrial area and from Netaji Subhas Road to Howrah Maidan a compact linear shopping zone skirts it on either side. It is quite narrow at places to allow a double line of traffic. Moreover, tram movements along this already congested road cause frequent traffic jams. The width of the southern part of the Grand Trunk Road, through which the largest volume of vehicular traffic proceeds to Calcutta, is, again, utterly inadequate. The bottlenecks, however, are most acute at Chandmari Bridge and at the crossing of the Benaras Road. The stretch from Chandmari Bridge to the northern periphery of the city is not well maintained and is frequently submerged during the rainy season.

The Dharamtala Road and J. N. Mukherjee Road, both serving the zone occupied by big industries as also some residential areas, are quite inadequate for the purpose because of their narrowness and congestion at several points. The latter, which is generally wider, has, however, to accommodate the numerous bus-routes passing through it. The Benaras Road connects the city with the rural hinterland which supplies Howrah with vegetables and other perishable foodstuff. A linear belt of factories is coming up very fast along this narrow road and unless immediate attention is given to the issues involved, the opportunity to widen and use it as a major communication link is likely to be lost. Similar is the case with a portion of the Howrah-Amta-Road. The growing tempo of industrial activity between National Highway No. 6 and the city is generating an ever increasing volume of traffic on this road. The Andul Road, a two-lane

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[1] loc. cit.

thoroughfare passing through agricultural lands (most of which has, however, been purchased as industrial sites), also requires attention.

The Howrah Maidan area, where most of the routes from different parts of the city converge, has wider roads except the Grand Trunk Road on the west. Due to the diversion of traffic, congestion is not felt so much here except during the peak hours.

"The Buckland bridge", writes A. B. Chatterjee,[1] "in which most of the vehicular traffic converges, is comparatively narrow to allow only two lines of vehicles. The congestion is further accentuated due to the slow-moving tramcars passing over the bridge. All the traffic, from every part of the city and outside converges to the end of the Bankim Chandra Road, near the Howrah Bridge where the width is sufficient only to allow six lines of vehicles with difficulty with narrow foot-paths on either side. The congestion led the Improvement Trust to build a new link-road to the Howrah bridge further north, through which most of the vehicles, to and from the northern part, can proceed. The extension of this link to the Grand Trunk Road avoids two sharp bends which most of the vehicles have to traverse as they proceed along the usual route through the Moulana Azad Road and the Abani Dutta Road, leading to the Grand Trunk Road.

"Of the important roads, passing through the compact residential-commercial areas, the Sibpur Road and the Subhas Road in Sibpur and Khurut respectively, are about 29 to 25 feet wide where the business sub-centres are located. These are extremely congested and the roads at these points are inadequate due to the congestion caused by the pedestrian traffic at certain hours during the market time."

Not surprisingly the Grand Trunk Road carries the largest volume of traffic in the area north of the bridge. The condition is the same on the Howrah end of the Rabindra Setu (Howrah Bridge) which is the terminus of no less than 22 bus routes, including 13 on the Howrah side. There are, also, 8 tram routes, including 2 of the Howrah city, besides taxi, lorry and car parks in front of the railway station. The Howrah Bridge, connecting Howrah with the rest of the country, sustains a volume of traffic which, according to a survey made in 1946, was almost as heavy as that over the London Bridge. Over a test period of 24 hours, it carried a traffic of 1,21,000 pedestrians, 2,997 heads of cattle, 1,951 bullockcarts, 1,577 horse-drawn vehicles, 4,289 hand-carts, 4,265 rikshaws, 3,246 motor cycles and pedal cycles, 5,150 motor cars and taxis, 4,286 motor lorries, 1,931 motor buses and 1,227 tram cars. The projected traffic load on the Rabindra Setu will be over 45,800 moving vehicles by 1969, 49,300 by 1971 and over 75,000 by 1976.[2]

The overall volume of traffic falls off rapidly as the various roads leave the urban areas and enter the rural sectors. The traffic volume

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[1] ibid. p. 63.

[2] The Amrita Bazar Patrika, dated 28.7.67.

increases somewhat on Tuesdays when the big wholesale cloth markets at Howrah remain open. That the traffic load has increased over the last few years is also corroborated by the increase in road accidents. "There were 956 road accidents in Howrah district during 1966 in which 65 people were killed and 341 injured against 269 accidents, 24 deaths and 88 injury cases in the first three months of this year (1967). In 1966 there were 258 accidents on G.T. Road from Botanical Garden to Bally Khal in which 14 people were killed and 94 injured compared to 72 accidents, 6 deaths and 24 injury cases in the first three months of this year (1967)." It is stated that lighting arrangements are very poor in the city. The roads of the Baly Municipality are comparatively well lighted. The police has set up 9 automatic traffic signals and 3 portable traffic signal points at various road-crossings in the city. They will shortly instal an automatic electric signal device on the five-point crossing at the junction of G.T. Road, Panchanantala Road, Belilios Road and Church Road.[1] But these efforts are far from sufficient to cope with the accelerated growth of road transport in the city.

Mass transit within the Howrah city

The biggest obstacle in the rationalization of mass transit facilities within Howrah town is the complete lack of an adequate road system. For the most part, trams and buses are unable to reach the major concentrations of highly populated localities because of restricted road access. As a result, rickshaws, cycles and such other slow moving vehicles have to serve such areas. There are about 26 bus routes in the city and its fringes. They carry more passengers than do the trams. The majority of the routes provide trunk-line type service rather than feeder service and are subjected to considerable congestion as well as over-loading. This results in delays that disrupt schedules, increase running time and reduce operational efficiency. The following table will indicate the role of some bus routes as a means of mass transportation in Howrah city and in the neighbouring countryside.

Route No.	Destination from Howrah	Total number of bus trips (up & down) daily
5	Garia	186
6	Garia	192
11	Baranagar	150
62	Uluberia (*via* Amta)	140
61	Andul	130
52	Ramrajatala	370
54	Baly	600
51	Baly Khal (*via* Haraganj Road)	288
56	Baly Khal (*via* Howrah Road)	224

[1] The Amrita Bazar Patrika, dated 3.5.67.

The following table gives the number of buses in each of the more important bus routes operating in Howrah and its vicinity.

Route No.	Destination from Howrah	No. of buses
51	Baly Khal	18
52	Ramrajatala	24
53	Kadamtala	34
54	Baly Khal	44
55	Botanic Gardens	19
56	Baly Khal	14
57	Uttar Bantra	14
58	Chatterjee Hat	16
59	Bakultala	16
60	Domjur	16
61	Andul	11

The routes 51, 54, 56, 59, 60 and 61 extend beyond the city limits. Similarly, the State buses on the routes 36B and 36C serve Kona and Salkhia-Bandhaghat respectively. Buses of routes 16 and 24 originating from Calcutta now ply up to Sibpur and Salkhia-Bandhaghat. Calcutta is also linked by 8, 8B, 11A, 15 & 35 bus routes. Four different parts of the city are well-served by these routes--the western, the northern, the southern and south-western areas.

The western part of the city, largely inhabited by middle-aged people engaged in various services, is served by five routes having 104 buses which cover most of the old residential localities, namely Khurut, Panchanantala, Bantra, Santragachhi, Chakraberia, Kasundia and Baksha. The northern part is served by three routes having 76 buses which connect the residential quarters of central Salkia and the local slum areas. The southern and south-western sectors are served by three routes having 46 buses which cover the important Sibpur area. The extension of tram routes to Haraganj and Sibpur indicates the greater concentration of passenger traffic between these two localities.

Those areas which are accessible within 15 minutes from the heart of the city (approximately the Howrah Railway station) may be called the inner zone which comprises the congested residential localities of Haraganj, Khurut, Panchanantala and a major part of Bantra and Baje Sibpur. The main administrative, business and commercial units as also the principal social and educational institutions of the city are located in this area. The centre of the city is within 30 minutes' reach from every part of the town except the semi-urban areas in the fringes, namely Amtala and Bakultala in the south-west, north

Baksha in the west and Dharamtala and Ghusuri in the north.[1] At the centre of the town, that is, at the Howrah Railway station, the traffic load is the maximum. According to a recent count taken by the Traffic Section of the Calcutta Metropolitan Planning Organization more than 1,80,000 persons pass through this point between 8 a.m. and 8 p.m. on each working day. The following table[2] will show that the peak periods occur between 9 and 10 in the morning and 6 and 7 in the afternoon.

NUMBER OF PASSENGERS ARRIVING AND LEAVING HOWRAH RAILWAY STATION: AVERAGE WEEK-DAY

	Howrah Station Traffic		
Hours of day	Arriving	Leaving	Total
8—9	10,827	2,804	13,631
9—10	23,751	3.100	26,851
10—11	18,945	2,596	21,541
11—12	7,547	2,083	9,630
12—13	6,259	3,400	9,659
13—14	8,894	3,357	12,251
14—15	5,242	4,325	9,567
15—16	7,108	3,939	11,047
16—17	8,136	7,876	16,012
17—18	8,080	13,768	21,848
18—19	7,168	14,142	21,310
19—20	4,586	10,519	15,105
Total	1,16,543	71,909	1,88,452

The Howrah station is also the main transfer point for bus and tram passengers between Howrah and Calcutta. The Traffic Section of the C.M.P.O. estimated that in 1952-53 the total number of in-bound and outbound passenger traffic at Howrah station was 2,33,58,648 which increased to 4,90,77,161 in 1962-63. Actual counts have shown that on an average week-day more than half a million persons cross the Howrah Bridge by all modes of travelling. The peak hour accounts for approximately 10.3 per cent of the daily total. These movements are summarized in the following table.[3]

[1] A. B. Chatterjee—op. cit. p. 68. The Isochrone Map depicting the time taken to travel from the Howrah Ry. station bus stand to different parts of the city gives very interesting information.
[2] Source: Traffic counts at railway station completed by the Traffic Section of C.M.P.O. in 1964-65.
[3] Source : Traffic Section, C.M.P.O.

MOVEMENT OVER HOWRAH BRIDGE: AVERAGE WEEK-DAY

Mode	No. of persons during peak hour	Average daily No. of persons	Average daily No. of vehicles
Trams	11,332	1,13,787	1,907
Buses	20,169	2,07,235	4,226
Other Fast Vehicles	3,500	41.080	22,481
Slow Vehicles	22,104	22,354	14,757
Pedestrians	15,065	1,23,443	—
Total	72,170	5,07,899	43,371

Tram services

The first section of the tramways in Howrah town was opened in June, 1905 and the whole system was completed in October, 1908. Originally, the commissioners of the Howrah Municipality had certain powers and duties relating to the construction, maintenance, use and leasing of the properties of the Company but under an Act passed in 1951 all these were vested in the State Government. The Company is now only liable to pay rents and taxes to the Howrah Municipality. Under the agreement of 1951, the Government has an option to purchase the Company on January 1, 1972. The administration of the Company was, however, taken over by the State Government in July, 1967 under the Calcutta Tramways (Takeover & Management) Act of 1967.

At present, the Calcutta Tramways Company (C.T.C.) maintains about 4.75 miles (7.65 kilometers) of tracks (one way) in the city and carries a passenger load of about 19 million per year by operating 30 tram cars of which the single-unit ones can carry 100 and the double-unit ones 200 persons. In 1966-67 only 10 single-unit and 6 double-unit cars were actually in service. There is only one depot at Ghasbagan, a sub-station at Tandal Bagan and a workshop which carries out all minor repair works. In spite of the fact that double-unit coaches are more profitable, they cannot be used on a portion of the track because of insufficient turning space. Compared to Calcutta the Howrah trams earn lesser profits; in 1963, the ratio between earnings and expenditure was 100:96.59. At present the Calcutta State Transport Corporation and the Calcutta Tramways Company operate their respective fleets quite independently. A co-ordinated effort in scheduling and routing may supplement each other and improve the traffic conditions in the city. The Howrah trams carry, on an average, only 30,806 passengers per day. Between 8-30 a.m. and 10-30 a.m. the average number of passengers is 3,764 and between 4-30 p.m. and 6-30 p.m. 4,716. That is, at the peak hours only 8,480 persons board the trams.[1]

[1] Source : Acting Agent, the Calcutta Tramways Company Ltd.

Vehicles & conveyances

The bullock cart is still indispensable and the most economical means of transport in the countryside served by difficult and unmetalled roads. There is no doubt that more village roads are needed but the Fourth Plan envisages the construction of only 38.6 km. of them. All other districts of West Bengal are scheduled to have a much larger mileage of rural roads constructed during the said Plan period. The iron tyres of the bullock carts are, however, a menace to the asphalt tracts. Use of rubber tyres, the only solution of the problem, is beyond the reach of the cart drivers because of their high cost.

For medium distances, cycles and for long hauls automobiles are increasingly becoming popular. In course of the eight years from 1956-57 to 1963-64 the number of goods vehicles registered in the district increased from 1,446 to 1,716 or a percentage increase of 18.67, the lowest in West Bengal over the same period. The corresponding increase in passenger vehicles was also the lowest for any district in the State—only 12.12 per cent (from 2,794 to 3,412).[1] The Regional Transport Officer, Howrah, could not furnish, for want of relevant records, the number of vehicles registered in the district since the commencement of the Third Five-Year Plan. He, however, reported that out of 324 buses now registered in the district, 304 were heavy and 20 medium vehicles.[2] In the early days of road planning a transport lorry of 5-ton capacity was thought to be the maximum load that could be put on any road. Since transport costs decrease with the increase in payload, it is not uncommon these days to come across trucks of 10-ton capacity plying on the highways of the Howrah district. The 1965 Transport Survey revealed that the higher the payload the greater is the distance travelled by a truck. Medium-sized trucks (5 to 9 tons) are, however, most common, and they carry 73 per cent (approximately) of the total goods traffic. Trucks up to 5-ton capacity mainly cater to the local or semi-local needs while

[1] Government of West Bengal—Regional Planning for West Bengal. p. 55.
[2] The details realting to the routes on which these buses ply are given in the following table as furnished by the Secretary, Regional Transport Authority, Howrah.

PARTICULARS OF BUS ROUTES IN OPERATION IN HOWRAH DISTRICT

No. & Name of Route	Length miles	km.	No. of buses plying each day	No. of trips per bus each day
53· Howran-Baltikuri	5	8.0		15
or			33	12
Belgachhia	3¾	6.0		
57: Howrah-Kona (Sibtala)	4½	7.2	25	10
36B: Howrah-Kona	4¾	7.6	16	8
52: Howrah-Ramrajatala	4½	7.2	22	12
58: Howrah-Chatterjeehat	5	8.0	17	12
55: Howrah-Botanical Garden	4½	7.2	24	8

(contd.)

those between 5 and 9 tons mostly serve regional centres within and outside the district. The widely varying nature of road surfaces, bridges and culverts and the payload restriction on inter-State travel are important reasons why heavier trucks are not as popular as they should have been.[1]

Public transport: Traffic characteristics, composition and flow of goods

The destination of traffic within the district is scattered and involves numerous shorthauls. Definite trends in the flow of goods were discernible from the week-long sample survey conducted by the C.M.P.O. This survey cannot, however, be taken as a weekly average and multipled by 52 to get an annual figure. It did not take into account the seasonal operations and made no claim that all goods vehicles on Howrah roads were enumerated. It revealed that inter-district commodity movement between Howrah on the one hand and Midnapore, Darjeeling, Jalpaiguri, Coochbehar, West Dinajpur, Malda and Murshidabad on the other was very insignificant. The bridge on the Rupnarayan on National Highway No. 6, the Farakka Bridge on National Highway No. 34, the Durgapur Expressway, a bridge over the Bhagirathi connecting National Highway No. 2 at Tribeni with National Highway No. 34 at Kalyani, the Purulia-Haldia Highway, and a bridge on the Mundeswari at Harinakhola on the Baidyabati-Bankura-Purulia State Highway will certainly improve the position by 1981 In spite of these drawbacks, certain

PARTICULARS OF BUS ROUTES IN OPERATION IN HOWRAH DISTRICT —*contd.*

No. & Name of Route	Length miles	km.	No. of buses plying each day	No. of trips per bus each day
59: Howrah-Bakultala	5	8.0	12	8
61: Howrah-Andul	9	14.4	12	6
62: Howrah-Uluberia	26	41.6	24	4
64: Uluberia-Bagnan	10	16.0	5	6
66: Bagnan-Syampur	14	22.4	12	6
60: Kadamtala-Domjur	14	22.4	26	15
54: Howrah-Baly Khal	6	9.6	44	12
51: Howrah-Baly Khal	6	9.6	32	10
56: Howrah-Baly Khal	6½	10.4		
67: Bagnan-Sibganj	20	32.0	4	6
65: Uluberia-Deulti	12	19.2	6	8
68: Bagnan-Kamalpur	18	28.8	6	6
69: Howrah-Sankrail	10	16.0	4	10
Total:	188½	301.6	324	

[1] Source : West Bengal Transport Survey Report, 1965.

trends revealed by the survey may be outlined. The 'down' direction flow is dominated by coal and building materials along National Highway No. 2 (Grand Trunk Road). "The major commodities moved are products of mines (principally coal—36 per cent), building materials (34 per cent), products of agriculture (principally grain—8 per cent) and miscellaneous commodities (22 per cent)."[1] Since the G.T. Road links the Calcutta Metropolitan District with the Asansol-Durgapur industrial complex as also the rest of India, it has to carry an enormous variety of goods from the port city to the rest of the country. It is estimated that 12 per cent of the 'up' traffic through Bandel (in Hooghly district) consists of iron and steel, 5 per cent of mineral oils, besides substantial quantities of medicines and chemicals.

Conveyances in the hinterland of Howrah city

Adequate rail and road transport have fostered a symbiotic relationship between the cities of Calcutta and Howrah and their hinterlands. Though lesser than that of Calcutta, the centripetal pull of Howrah is not insignificant in this behalf. The faster train services are relatively more important than bus transport which connects a much more limited area within the train service zones Rail communication is thus a significant index of the journey-to-work zones of both Calcutta and Howrah.

A host of perishable goods is daily brought to the twin cities by road and rail. In the inner areas of Howrah, however, road transport predominates and serves the main collecting centres for these commodities. Thus, Bagnan, Champadanga, Tarakeswar and Hooghly, all connected by the railways, are not more important than Bogri, Nonakunda and Ramnathpur all connected by roads. It is interesting to note that the Ramrajatala market (in Santragachhi), the Sibpur market and the Kali Babu's market (in Khurut), the Kadamtala Market (in Bantra) and the Haraganj market (in Salkia) in the inner fringe of the city, have sufficient pull to attract some of these commodities even from the Calcutta markets. Kali Babu's market in Khurut is conspicuous as a central mart from where the other bazars obtain their bulk supplies.

The southern part of the district is largely inhabited by the Kaihartta caste who are mainly devoted to fishing and agriculture.[2] The fish, egg and poultry supply zone has a marked extension to the south in spite of the fact that both rail and road services are inadequate there. On the other hand, the milk supply zone extends mostly towards the north with important centres at Magra, Tarakeswar, Nalikul, Amta and Daulatpur which are well known for the particular caste dealing in milk and milk products.

The journey-to-work zone is conspicuous by its north to south

[1] West Bengal Transport Survey Report, 1965. p. 29.

[2] A. B. Chatterjee—'Hinterland of a symbiotic city: A case study' in the Geographical Review of India Vol. XXVII, No. 2, June 1965. Calcutta. pp. 58-61.

extension along the densely populated belts on both sides of the Bhagirathi. The furthest point on the north is the Katwa Junction, at a distance of 145 km. from Howrah which takes about 4 hours to cover by a fast train. Similarly, Bongaon in the north-east is 77.3 km. away, Burdwan is 94.4 km. to the north and Balli-chak 91.2 km. to the west. The other terminal points of the zone are Tarakeswar, Seakhala, Champadanga, Amta, Budge-Budge, Diamond Harbour, Lakshmikantapur and Port Canning. This journey-to-work zone is of vital importance in the planning of the Greater Calcutta area.

RAILROADS

Origin of railways in the district

As early as in 1844, the political and commercial advantage of having a direct railway link between Calcutta, the then seat of the Imperial Government, and Delhi, the titular seat of the Mughal Emperor, was appreciated and in May of the following year the East Indian Railway Company was formed in England.[1] Under the contract of 1849 the Company was guaranteed by the Government of India an annual interest of 5% on the outlay which proved to be too onerous from the Indian taxpayers' point of view. The evils inherent in this system had become too apparent by 1869[2] when Lord Lawrence urged the adoption of direct State construction.[3] In 1879 the Government purchased the property owned by the East Indian Railway Company which was worked by a reconstituted company till the end of 1924.[4] The Bengal Nagpur Railway Company was formed in 1887. It was to supply the capital and to operate the railway (which in all respects belonged to the State) against a permanent guarantee of an annual interest of 4% and one-fourth of surplus profits.[5] In 1895 Messrs Martin & Company sponsored the formation of two metre-gauge feeder railways which in 1899 were set up as two joint stock companies styled the Howrah-Amta Light Railway Company and Howrah-Sheakhala Light Railway Company, both subject to the Indian Railway Act.[6] The District Boards of Howrah and Hooghly guaranteed a minimum net profit on the invested capital with a provision to share excess profits while the Howrah Municipal Commissioners allowed free use of their roads for the first 20 years, a track rent being leviable thereafter.[7]

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[1] The 'Lifeline', dated 15.8.1965.

[2] The resulting extravagance and waste in construction led Mr. W. N. Massey, a Finance Minister of India under Lord Lawrence and Lord Mayo to remark that the East Indian Railway Company had cost twice as much as it ought to have. The evidence before the Parliamentary committees set up for investigating the conditions of Indian Railways during the years 1871-74 also supported this criticism—Indian Railways: One Hundred Years (1853-1953), Government of India, New Delhi, 1953. p. 19.

[3] J. Johnson—The Economics of Indian Rail Transport. Bombay, 1963. p. 11.

[4] History of Indian Railways corrected up to 31st March 1951, Government of India. New Delhi, 1954. p. 65.

[5] Indian Railways: One Hundred Years (1853-1953), Government of India. 1953. p. 23.

[6-7] Source : Publicity Officer, Martin Burn Ltd., Calcutta.

In 1920 a special committee under the Chairmanship of Sir W. Acworth was appointed to go into the evils of mixing up railway revenues with those of the general administration and the unsuitability of company management of Indian Railways. Following its recommendations, the Government took over the East Indian Railway on 1.1.1925 and the Bengal Nagpur Railway on 1.10.1944 by terminating the previous contracts with them.[1] Until the outbreak of World War II, many reorganizational schemes were introduced on the recommendations of various expert committees including the one headed by Sir R.L. Wedgewood. The cessation of hostilities in 1945 and the partition of the country in 1947 necessitated a complete reappraisal of the railway administration and the Government accepted many of the recommendations of the Indian Railways Enquiry Committee appointed in 1947 under the chairmanship of Dr. H. N. Kunzru. The district, however, did not receive the full benefit of the changes as the Howrah-Seakhala and Howrah-Amta Light Railways continued to be in the private sector outside the regrouped zonal system intended to make the railways more efficient and uniform in their practices.

Railways serving the district

The rationalization led to the merging of all sections of the East Indian Railway which lay east of Mughalsarai and the Bengal Nagpur Railway into the Eastern Railway in April, 1952 which again was split up into the Eastern Railway and the South Eastern Railway on 1.10.55 with divisional components, the actual working units, functioning under each. The Howrah district is now served by the Howrah and Sealdah Divisions of the Eastern Railway and the Kharagpur Division of the South Eastern Railway.

The first experimental railway line from Howrah to Hooghly was opened on August 15, 1854,[2] although its formal opening was delayed till February of the following year when the extension of the section up to Raniganj, the important coal producing centre, was complete. The Howrah-Burdwan Chord line was opened to regular traffic in 1921.[3] The Report on the Administration of Bengal states that this 45.26 miles (72.41 km.) long route was 'partially opened' during that year,[4] and formally opened from January 1, 1917 although the 1961 District Census Handbook, Hooghly, mentions 1913 as the year of its inception. This very busy section has been electrified since 2.10.65. Electrification of the Howrah-Sheoraphuli and Howrah-Bandel sections was completed in December, 1957 and the strips from Bandel to Memari and Memari to Burdwan were electrified in July and August respectively of the following year.[5] Use of diesel engines is another recent feature. These locomotives have a much higher

[1] J. Johnson—op. cit. p. 34.
[2] The 'Lifeline' dated 15.8.1965. Eastern Ry., Calcutta.
[3] Report on the Administration of Bengal, 1921-22. Calcutta, 1923. p. 68.
[4] Report on the Administration of Bengal, 1915-16. Calcutta, 1917. p. xviii.
[5] Howrah-Bandel section has been converted from D.C. to A.C. traction in August 1967—The Amrita Bazar Patrika, dated 23.8.67.

haulage capacity than their steam counterparts It is estimated that this new mode of traction, together with remodelled marshalling yards at major railway stations, will increase the line capacity by at least 40 per cent.[1] As a further improvement, modern methods of traffic control like installation of route-relay interlocking and automatic synchronized signal system at a cost of Rs. 50 lakhs have been introduced in August 1967[2] for operational efficiency and two to three-fold increase in line capacity with the existing assets.[3]

Besides the terminus at Howrah, the Eastern Railway has the following stations within the district, namely Lilua, Belur, Baly, Belanagar and Baly Ghat. The opening of the Howrah-Kharagpur section was done in gradual stages--a single-track line being completed in December 1900 and a double-track one in September 1928. The Santragachhi-Shalimar Branch was opened on 15.3.1901 and other lines, e.g. the Fort Gloster Branch and the East Rupnarayan Bank between 1900-1917. Altogether 17 stations of the S.E. Railway, namely Ramrajatala, Santragachhi, Maurigram, Andul, Sankrail, Abada, Nalpur, Bauria, Chengail, Phuleswar, Uluberia, Bir-Shibpur, Kulgachhia, Bagnan, Deulti, Padmapukur and Shalimar fall within the district. The South Eastern Railway meets the Eastern Railway at Tikiapara. The Howrah-Amta Light Railway, which was opened in gradual stages, came into existence on 1.6.1898 and its Champadanga branch on 24.8.1908. The Howrah-Sheakhala Railway was opened on 7.11.1897. The stations on these two Light Railways falling within the district are Howrah Maidan, Baltikuri, Bankra, Salap, Kantalia, Makardaha, Domjur, Dakshinbari, Bargachhia Jn., Patihal, Munshirhat, Maju, Dakshin Maju, Jalalsi, Panpur, Harish-Dadpur, Amta, Jagatballavpur, Kona, Ekshara, Chamrail and Jagadishpur-Baluhati.

Howrah Bridge and Vivekananda Setu

"A very early attempt to build a (railway) bridge over the Hooghly was made in the late forties of the last century at a place called Govindpur, near Calcutta. Unfortunately, soon after the bridge was completed the entire structure collapsed. In 1875, a pontoon bridge was completed between Calcutta and Howrah, but only to carry vehicular traffic. The pontoon bridge was finally demolished in 1945 and in its place was constructed a single span cantilever type multipurpose suspension bridge for road traffic, which today ranks among some of the finest bridges of the world. ...Constructed in 1927-29, the Willingdon Bridge (renamed Vivekananda Setu—Ed.) which spans the Hooghly at Baly was by far the most expensive and the most

[1] A factor determining the extent of electric traction which might worry planners is that of profit and loss. It is found that electric train services are incurring substantial loss every year. Concentration of traffic during peak hours and cheap fares are the main reasons behind these unremunerative services. *Vide*, Official Report of the Committee on Transport Policy and Co-ordination, Government of India, Planning Commission. New Delhi, 1966, pp. 47-8.

[2] The Amrita Bazar Patrika, dated 23.8.1967.

[3] Regional Planning for West Bengal. pp. 51-52.

difficult of the railway bridges to be constructed in India. The bridge was constructed at a total cost of Rs. 1,14,67,000."[1]

Howrah railway station

The Howrah railway terminus which, in its present form, dates back to 1906 is one of the busiest railway stations in India with 16 platforms dealing with 1.5 lakhs of passengers and 250 mail, express, passengers and suburban trains on an average per day. As the terminal station of two important railways, it provides direct rail-link to most important places all over the country. Although it is under the administrative control of the Divisional Superintendent, Howrah Division of the Eastern Railway, the S.E. Railway maintains one Inspector and staff to look after its trains originating from here. Besides about 75 long-distance trains starting from Howrah, Janata Expresses running daily between Howrah and Delhi and Howrah and Madras, bi-weekly between Howrah and Bombay (*via* Patna) and weekly between Howrah and Dehradun (*via* Grand Chord) were introduced on 1.10.1949, 2.10.1966, 1.10.1960 and 2.9.1959 respectively for the benefit of third class passengers.[2] In August 1967, the number of suburban trains (generally E.M.U. on the Eastern Railway) running daily on various sections of the Eastern and South Eastern Railways was as follows :

Section	No. of train services	
	Up	Down
Howrah-Bandel	30	30
Howrah-Serampore	1	1
Howrah-Sheoraphuli	6	6
Howrah-Tarakeswar	12	12
Howrah-Burdwan (Main line)	11	11
Howrah-Burdwan (Chord line)	9	9
Howrah-Uluberia	2	2
Howrah-Mecheda (excluding 1 more on Saturdays)	6	6
Howrah-Panskura (excluding 2 more on Saturdays)	8	8

In addition, Baly Ghat station on the Calcutta-Chord Railway is served by 11 Up and 11 Down trains.

Parcels and goods traffic is equally heavy at Howrah. Besides the receipt and despatch of several thousand parcels per day, two Express trains meant for carrying parcels exclusively reach and leave Howrah daily. For goods traffic purposes, the Howrah station area comprises Howrah Goods, Lilua Sorting Yard, Punjab lines, Ramkristapur, Shalimar and Howrah General Stores and Belur Scrap Yard as well. Of these, Shalimar, which is a marshalling-cum-terminal yard,

[1] Indian Railways: One Hundred Years (1853-1953), Government of India. New Delhi, 1953. pp. 58 ff.
[2] Source : Public Relations Officers, Eastern and South Eastern Railways, Calcutta.

serving the largest goods shed of the South Eastern Railway and a number of sidings attached to it, deserves special mention. Besides dealing with the originating and terminating traffic, this yard also deals with all traffic coming from Kidderpore Docks, the Eastern Railway stations in the Calcutta area and *via* South Eastern Railway. On an average, 10 goods trains are handled by the Shalimar Yard and the new Padmapukur Yard daily. The shed accommodation available here for inward 'smalls' traffic is, 1,24,214 sq. ft. (11.54 hectares) as against 72,488 sq. ft. (6.73 hectares) available till 18.6.65. The incoming traffic consists of piece-goods, yarn, hemp, medicines, papers, tyres, grains, pulses, *biḍi*, *biḍi* leaves, tobacco, betel nuts, cardamom, hides and skins, iron materials etc. while the outgoing ones are gunnies, timbers, tea, salt, piece-goods, electric fans, sewing machines, plastic goods, spices, oils, hides and skins, grains and pulses, paints and colours, lubricating oil, glass bottles, stationery, buckets, iron materials etc. The volume of goods traffic has registered a gradual rise since 1961-62 when the number of wagons received and despatched was 43,508 and 37,291 respectively, the corresponding figures for 1965-66 being 52,553 and 48,129 indicating an increase of 21 and 29 per cent respectively. The gross and net earnings also show the same trend, the respective figures being Rs. 11,58,32,534 and Rs. 5,65,89,134 in 1965-66 against Rs. 10,25,93,941 and Rs. 4,87,12,247 in 1963-64.[1] (The latest available figures in respect of passenger and goods traffic originating from the stations on the Eastern and South Eastern Railways within the district as also the corresponding earnings are given in Appendix A at the end of this Chapter).[2]

In August 1967, the Howrah-Amta Light Railway (including the Champadanga Branch falling mostly in the Hooghly district) and the Howrah-Sheakhala Light Railway served the district with 23 Up and 23 Down trains running daily on the former and 11 Up and 11 Down on the latter. A slightly depleted service runs on both the railways on Sundays. According to Messrs. Martin Burn, the Managing Agents, the net earnings of the Howrah-Amta Light Railway gradually declined from 1957-58 but showed a significant increase in 1964-65 whereas a steady decline was noticed in the net earnings of the Howrah-Sheakhala Light Railway. The revenue earned by the Howrah-Amta Light Railway from goods traffic increased from Rs. 4,47,902 in 1960-61 to Rs. 5,08,973 in 1964-65 while the corresponding figures for the Howrah-Sheakhala Light Railway were Rs. 58,961 in 1960-61 and Rs. 48,130 in 1964-65.[3]

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[1] Source: Chief Commercial Superintendent, South Eastern Railway, Calcutta.

[2] Source: Chief Commercial Superintendents, Eastern and South Eastern Railways, Calcutta.

[3] Source: Traffic Superintendents, Howrah-Amta and Howrah-Sheakhala Light Railways.

An Indian railway is termed Class I if its gross annual earnings exceed Rs. 50 lakhs, Class II if they are between Rs. 10 and 50 lakhs and Class III when they are below Rs. 10 lakhs. The table below gives the names, classes, gauges, lengths, ownerships and working agencies of the railways operating in the district.

RAIL-ROADS IN HOWRAH DISTRICT: THEIR NAMES, CLASSES, GAUGES, LENGTHS, OWNERSHIPS AND WORKING AGENCIES

Name and Class of Railway	Gauge	Total length within the district (Approx.)	Owned and worked by
Howrah-Amta Light Railway (including Champadanga section): Class III	2′ 0″	48 km.	Howrah-Amta Light Railway Company
Howrah-Sheakhala Light Railway : Class III	2′ 0″	12 „	Howrah-Sheakhala Light Railway Company
Eastern Railway. Class I			
(a) Main line	5′ 6″	9 km.	Govt. of India
(b) Howrah-Burdwan Chord line	5′ 6″	14 km.	„
(c) Calcutta-Chord Rly.	5′ 6″	6 km.	„
South Eastern Railway (including Santragachhi-Shalimar and Bauria-Fort Gloster Sections): Class I	5′ 6″	58 km.	„

Role of the railways in the economic life of the district

The Eastern and South Eastern Railway network has not only contributed to the economic growth of Howrah district but also of entire Eastern India. It has been instrumental in harnessing the immense agricultural and industrial potential of the area by providing transport facilities for the carriage of raw materials and finished products. Besides the highly industrialized zone in the immediate vicinity of Howrah city, numerous jute and cotton mills, cable factories, foundries, engineering firms, glass works, vanaspati and oil mills, flour mills, aluminium and rubber works etc. have come up all along the industrial belt from Baly in the north to Phuleswar in the south. Apart from serving all these industries, the railways also contribute largely to the movement of agricultural produce like jute, paddy, betel leaves, seasonal fruits and vegetables.

Rail-road competition and regulation of transport

Out of about 20 road routes in the district on which regular bus services ply, several run parallel to the railways. Due to high density of population in the suburban areas, both road and rail services are equally patronized by the people. The Orissa Trunk Road running more or less parallel to the South Eastern Railway up to Deulti, the westernmost station within the district on that railway, shares with the latter a large volume of traffic.[1] The light railways with their

[1] Source: Chief Commercial Superintendent, South Eastern Railway, Calcutta.

slow moving trains have, however, fared the worst from road competition as they are mostly flanked by cross-country roads on which swifter motor transport is available in plenty.

WATERWAYS, BRIDGES & FERRIES

The broad and metre gauge railway lines in their initial years of operation actually promoted river traffic; it was the branch lines penetrating deeper into the country which later offered serious competition to river traffic, otherwise the rivers served as feeders to the main railway lines.[1] At the instance of the East India Company, surveys of river-borne traffic on the Bhagirathi were first undertaken by Rennell in 1764-65 followed by Colebrook in 1801 and 1807. In 1828, using Colebrook's maps, Capt. Thomas Prinsep investigated the suitability of the Bhagirathi for steam navigation. His report was so favourable that by Bentinck's time (1834) there were regular steamer services from Calcutta to Allahabad. An important reason for the growth of river traffic in this region was the discovery of coal in Bengal which was carried much more economically along the waterways. In Crawford's time (1903) the great bulk of the water-borne traffic of the lower provinces of Bengal was carried by the Bhagirathi which, before the railway was constructed, was the main artery for transit of bulky goods. The Calcutta Steam Navigation Co. then used to operate a daily service of steamers from Hatkholaghat in Calcutta to Kalna in Burdwan district.[2] Even in O'Malley's time inland river transport dominated the scene.

Rivers

"The chief navigable waterways are the Hooghly, Damodar and Rupnarayan. The Hooghly and the Rupnarayan are navigable at all seasons of the year throughout their course in and along the district. The Damodar ceases to be navigable after the rains, except in the lowest section from the mouth of the Gaighata *Khal* to its own outfall in the Hooghly; and during the winter it is navigable up to Amta during spring tides only. Small boats also ply in the rains and winter months along the numerous creeks intersecting the district. Of

Creeks

these creeks the chief are: (1) the Bally *Khal* extending from the Dankuni marsh west of Serampore to the Hooghly. It is 10 miles long, 30 feet broad and 12 feet deep, and forms the main channel of the Dankuni drainage works. (2) The Sankrail *Khal* (the old Saraswati) 8 miles long, 15 feet broad and 9 feet deep. (3) The Kalsapa *Khal* (the old Kana Nadi) so called because it extends from the Hooghly near Kalsapa, which is 6 miles long, 30 feet broad and 8 feet deep. Its lowest section now forms a channel of the Rajapur drainage works. (4) The Mithakundu *Khal*, which connects the Damodar with the Hooghly and falls into the latter at Mithakundu below Uluberia. It is 6 miles long, 50 feet broad and 18 feet deep. (5) The Pukuria *Khal* joining the Damodar with the Hooghly, 3

[1] J. Johnston—Inland Navigation on the Gangetic River. Calcutta, 1947. p. 30.
[2] D. G. Crawford—Hughli Medical Gazetteer. Calcutta, 1903. pp. 78-81.

miles long, 60 feet broad and 18 feet deep. (6) The Banspati *Khal* from Amta to Uluberia, about 15 miles long and 30 feet broad. (7) The Madaria *Khal*, extending from beyond the district and falling into the Damodar above Amta. It is an old branch of the Damodar with a length of about 10 miles in the district and a breadth of 30 feet. (8) The Gaighata and Bakshi *Khal*, a natural channel slightly improved, about 12 miles long. It connects the Damodar with the Rupnarayan by a tortuous passage which is closed during part of the year. ...

Canals

"The only canal in the district is the Uluberia High Level Canal which has two sections. Its first reach starts from Uluberia and joins the Damodar below Persandpur, two miles below the Bengal-Nagpur Railway bridge over that river. It is 8 miles in length; its width at top is 92 feet and at bottom 36 feet; and its depth is 9 feet. West of Uluberia the Orissa Trunk Road runs along its northern bank for 5 miles. The second reach extends from the other side of the Damodar to the left bank of the Rupnarayan several miles below the railway bridge. This reach is 4 miles long; its width at top is 120 feet and at the bottom 36 feet; and its depth is 14 feet. The traffic on the canal has almost disappeared owing to the opening of the Bengal-Nagpur Railway."[1]

Since O'Malley's time, the decay of the rivers and the partition of Bengal in 1947 combined to reduce the commercial importance of inland waterways of the district which, nevertheless, carry a considerable amount of cargo to feed the Calcutta port. The Bhagirathi bordering the district is navigable throughout the year. The Rupnarayan is, however, deteriorating—boats and launches drawing 1½ ft. or less can ply beyond Kolaghat up to Ghatal: previously boats of 8 ft. draft could do this journey. The Midnapur Canal between the Rupnarayan and the Damodar has now been closed to navigation and the stretch between Damodar and Uluberia is fast declining; the total volume of cargo carried by it decreased from about 39,000 tons in 1952-53 to only 3,000 tons in 1955-56.[2]

Howrah port

The origin and growth of Howrah port is coeval with the establishment of ship-building and ship-repairing industry, discussed in detail in Chapter I. In 1825, when steam vessels were regularly plying on the Bhagirathi, the entire river front from Golabari Ghat in the north to the former Howrah Ghat in the south (except the portion occupied by salt warehouses) was dotted with dockyards. Towards the middle of the 19th century, the prosperity of Howrah town depended mainly on its ship-building and repairing establishments among which that of Mr. Reeves was big enough to accommodate 'magnificent steamers' making their voyages from the United Kingdom.[3] During this period

[1] O'Malley & Chakravarti—op. cit. pp. 122-3.
[2] Source: C. M. P. O.
[3] The Calcutta Review, Vol. IV, July-December, 1845. p. 482.

at least two Indians, Mr. T. N. Paramanik and Mr. K. Sarkar, joined the industry and had their own docks at Salkia.[1] The well-known Hooghly dockyards were started in 1842 by an Indian Mr. J. Mullick with Mr. Ried at Salkia and the Albion Dock by another Indian, Mr. P. Mukherjee with a few Europeans in partnership.[2] By the last quarter of the 19th century, there were about 8 large docks in between Salkia and Ghusuri besides some other smaller docks.[3] The year 1870 saw the transfer of the river-bank extending from Shalimar to Messrs. Burn & Co.'s wharf at Ramkrishnapur to the Calcutta Port Commission which improved the area and constructed 'inland vessels wharves.'[4] The subsequent construction of dockyards near the former Chandmari Ghat, north of the Howrah Bridge, by the Port Commissioners and the extension of the dockyards at Sibpur and Ramkrishnapur in the south was perhaps influenced by the formation of a large sand bank formerly called the Sibpur Island and the reclamation of similar islands below the Howrah Ghat where later on two big foundries of Messrs. Burn & Co. and John King & Co. carried on similar works.[5] The number of big dockyards decreased towards the beginning of 20th century and in O'Malley's time only four dockyards including that of the Port Commissioners were to be found in Howrah, Golabari and Salkia. By 1925 the industry extended from Salkia to Sibpur. It now stretches along the river bank from Ghusuri in the north to Sibpur in the south, the biggest concentration being in central Salkia where the industry first took its root. Among all the districts in different States of India, Howrah possesses the largest number of dockyards.[6] The Calcutta Port Commission owns the river front by patches from Timber Pond in the south to Golabari Ghat in the north. Its main function is to look after traffic and moorings within its jurisdiction along the Bhagirathi. The left bank of the river being shallow, ships move up the right bank and are tied to moorings from which the cargo is taken to the wharves and then to the shore. From the services rendered to the various shipping companies the Calcutta Port Commission earned about Rs. 53 lakhs during the period 1962-65. The moorings consist of buoys, chains and anchors many of which are not in working order. An unpublished report of the C.M.P.O. reveals that most of the jetties require repairs which cannot be undertaken for want of foreign exchange.

Bridges

On account of the large number of rivers and waterways in the district, the roads are provided with many bridges, and in Howrah

[1] A. B. Chatterjee—'Industrial landscape of Howrah' in the Geographical Review of India, Vol. XXV, No. 4, December 1963. p. 214.
[2] C. N. Banerjei—op. cit. p. 75.
[3] ibid. pp. 75-76.
[4] A. K. Roy in Census of India 1901, General Report Volume by E. A. Gait. pp. 123-4.
[5] ibid. p. 124.
[6] See Appendix of 'Industrial Landscape of Howrah' by Dr. A. B. Chatterjee.

city several bridges had to be built over the East Indian and the South Eastern Railway lines, the biggest being the Buckland Bridge which is more than a quarter mile long. By far the most important of them all is the Howrah Bridge across the Bhagirathi connecting the twin cities of Howrah and Calcutta. The old bridge, rigged on pontoons, was completed in 1875 and was managed by the Calcutta Port Commission for about 70 years before it was dismantled. It had a removable floating section allowing a 200-feet clear opening for the passage of large vessels and two 60-feet openings with a head-room of 22 feet for smaller crafts. By the thirties of the present century the traffic between commercial Calcutta and industrial Howrah had outgrown the capacity of the old bridge and it was decided to build a new one. The shifting character of the river prompted the designing of the present bridge as a cross between a cantilever and a suspension bridge which, incidentally, is the third largest of its kind in the world. It was designed by Messrs. Rendel, Palmer & Tritton Co., consulting engineers, while Messrs. Cleveland Bridge & Engineering Co. were the main contractors. The sub-contract for fabrication of the steelwork was given to Messrs. Braithwaite, Burn & Jessop Construction Co., the erection being done by the main contractors who took 8 years to complete the job in 1943 at a cost of Rs. 3.33 crores. Except for a few special items, all the 26,500 tons of steel (of which 18,200 were of high tensile quality) were supplied by the Tata Iron & Steel Co. Ltd. The bridge was never formally opened but the first tram car crossed it on February 1, 1943. An interesting fact about the bridge is that it is 48 inches (1.22m.) longer by day than by night because of the higher day temperatures. The roadway slabs are, therefore, suitably spaced to prevent cracks and the tram lines have 16 expansions and 40 articulated joints. Another odd fact is that the bridge bends over very slightly in strong winds.

Howrah Bridge

It is estimated that the bridge will eventually pay for itself. The 'down' payments were made by a body known as the Commissioners for the New Howrah Bridge and they raised the money through loans etc. which are being repaid by the bridge's excess income over expenditure. The income consists of contributions from the Calcutta Corporation and Howrah, South Suburban, Garden Reach and Tollygunge Municipalities by way of taxes on vehicles; from the railways in the form of taxes on goods traffic; from the Calcutta Tramways Co. for the use of the bridge for running their cars and from the West Bengal Government from its road fund. The income and expenditure approximate Rs. 20 lakhs and Rs. 7 lakhs per year.[1]

Rishi Bankim Chandra Bridge

With the expansion of the railway yard at Howrah (which covers a very big area now), a proposal for the construction of a bridge across the rail lines was taken up for consideration as early as in

[1] A. Mitra—op. cit. p. xlii.

1862. The over-bridge was completed and handed over to the Howrah Municipality some time in 1884. In May 1904, probably due to the extension of the railway yard and for inadequate structural stability of the bridge, a re-construction was undertaken when provision was made for laying tram tracks on it in addition to pedestrian and vehicular traffic. After renovation it came to be known as the Buckland Bridge after Mr. C. E. Buckland, I.C.S., who was then the District Magistrate of Howrah. After Independence, it came to be known as Rishi Bankim Chandra Bridge. "The total length of the bridge, including approaches, measures out to be just over 1926 feet. It has an approach gradient of one in twentyfour (1: 24) which is, no doubt, steeper than the normal slope. The width of the carriage-way is however not uniform. It varies from 33'-6" to 35'-0." There exists a clear headroom of 16'-1" above the rail level. ... Two six feet wide sidewalks on either side of the bridge ... were made up of old sawn sleepers which have been subsequently replaced by R. C. Slabs. Nearly a decade ago, slow moving carts and loaded lorries were prohibited to ply over the bridge to avoid traffic jam and for the safety of the structure. At present empty lorries are allowed to move over the bridge. Footpaths have railing on outer sides which are also further enclosed with six feet high vertical galvanised corrugated iron sheets to obstruct the view of the Howrah Station and Goods Yard. A net-work of railway lines passes under the bridge."[1]

The bridge is too weak structurally and too narrow in width to meet the requirements of present-day traffic. A reconstruction scheme has, therefore, been prepared by an expert group consisting of senior engineers and technicians of the C.M.P.O., Howrah Improvement Trust and the Eastern Railways which envisages that the new bridge will be twice as long as the present one, namely 420·5 m. (including 310·9 m. over the railway tracks) and will cost about Rs. 4.70 crores. It will start from the western side of the Howrah Bridge Approach Road and will pass over Dobson Road, the railway yard, Church Road and a portion of the Howrah Maidan and end near the junction of Nityadhan Mukherjee Road and Grand Trunk Road. (Under a different scheme the Howrah Improvement Trust is constructing a similar fly-over from the Howrah Bridge Approach Road eventually joining up with Abani Dutta Road in Salkia). In the first phase, the proposed bridge will be connected with the existing Cab Road leading to the station and in the second it will be extended further north to connect with the new Howrah Bridge Approach Road.

Bridges on the Rupnarayan

Another very important bridge recently constructed across the Rupnarayan provides the 'missing link' on the Howrah-Bombay

[1] S. Chatterjee—"Buckland Bridge and Howrah Station Area" in the Eastern Railway Magazine, Vol. XIII, No. 12, December 1964. pp. 5 & 7.

National Highway. It is the longest in West Bengal (731.5 m.). A railway bridge has also been built a little distance away to deal with the anticipated increase in traffic on the Howrah-Panshkura section of the S.E. Railway after the construction of the deep water port at Haldia. The construction of a concrete cast tunnel in preference to a second Howrah bridge over the Bhagirathi connecting Howrah and Calcutta has been elaborately considered but the Government has eventually decided to accept the recommendations of the Eastern Regional Transport Survey Team which suggested the construction of a road bridge across the river so that the Calcutta end of the bridge should touch the bank near Princep Ghat for easy connexion with the National Highway on the other side of the river facilitating optimum traffic interchange.

The second Howrah Bridge

River ferries

Following is an extract from the old District Gazetteer of Howrah of 1909 describing the contemporary river ferries. Many of them have since lost their importance due to the coming up of alternative means of crossing the rivers in recent years. "The District Board maintain eleven public ferries, all except one being in the Uluberia subdivision. They are:—(*a*) On the Damodar (1) Mahishrekha ferry, thana Bagnan, with two subsidiary ferries, Khadinan and Bansberia; (2) Boalia ferry, thana Bagnan; (3) Garchumuk ferry, thana Syampur; (4) Syampur ferry, thana Syampur. (*b*) On the river Rupnarayan (5) Bakshi ferry on the Bakshi *Khal* outfall, thana Amta; (6) Gopiganj ferry, thana Amta, with two subsidiary ferries at Pansuli and Dudhkumra; (7) Mankur, thana Bagnan; (8) Sasati, thana Syampur; (9) Jhumjhumi, thana Syampur, just opposite Tamluk. (*c*) Two ferries on creeks, viz., (10) Sijberia ferry on the old Kana Nadi (present Kalsapa *Khal*), thana Uluberia; and (11) Sankrail ferry on the Old Saraswati (modern Sankrail *Khal*), Sankrail outpost.

"On the Hooghly river public ferries are maintained by the Port Commissioners within the limits of their jurisdiction and by the District Board of the 24-Parganas outside those limits. The Port Trust has its northern boundary pillar in Ghusuri a little above the Central Jute Mills; while the southern boundary pillar was lately moved from Panchpara above Rajganj to Bauria, just north of the Lawrence Jute Mills. When the Howrah bridge is open, railway passengers are ferried across from Armenian Ghat to the railway pontoon and back by two of the bridge steamers. The Port Commissioners have also started since 1907 two sets of steamer services, one above the bridge and the other below it. Below the bridge three steamers ply regularly between Chandpal Ghat and the Kidderpore Docks on the Calcutta side, and Telkalghat, Ramkristapur, Sibpur and Shalimar on the Howrah side. Above the bridge two steamers ply regularly between Barabazar Ghat and Ahiritola Ghat on the Calcutta side and Salkhia Banda Ghat on the Howrah side. The services, which run only in the daytime, are popular with the

public, the fares being extremely small, viz., an anna to a quarter anna."[1]

At present there are 12 ferries under the management of the Zilla Parishad, Howrah and 3 inter-district ferries between Howrah and 24-Parganas. The Zilla Parishad ferries are: one on the Gaighata *Khal* at Bakshi, 5 on the Rupnarayan at Gopiganj, Pansiuli, Dudhkumra, Mankur and Antila Para, one on the Banspati *Khal* at Sijberia, and 5 on the Damodar at Khadinan, Bansberia, Garchumuk, Boalia and Syampur. Of the inter-district ferries, the three most important are on the Bhagirathi at Falta-Sibganj, Falta-Bargachhia, and Nurpur-Tantikhola. On the maps of the Director of Land Records, West Bengal, a few other ferries are, however, shown, e.g. at Kasipur, Purba Basudebpur, Puralipara, Harapur, Uluberia and Radhanagar on the Bhagirathi, and at Sasati, Naupala and Panitras on the Rupnarayan.

AIR TRANSPORT & OTHER MEANS OF TRANSPORT

There is no aerodrome or ropeway in the district. The nearest aerodromes are at Dum Dum and Barrackpore in 24-Parganas, Kalaikunda in Midnapur and Panagar in Burdwan district.

TRAVEL AND TOURIST FACILITIES

Old-time rest houses and *dharamsālās*

Old-time rest houses and *dharamsālās* hardly exist in the district now. The only information about them can be gleaned from a book[2] by Benimadhub Chatterji which mentions that "the Cuttack Road is the immortal work of Maharaja Sukhmoy Roy. This famous Grand Trunk Road was constructed long before the days of Railways and soon became of immense importance. It traverses a distance of two hundred and eighty miles from Uluberia to Puri Singdarwaja. Brick built Dharamsalas were built as rest-houses for pilgrims" at many places along the road including two "at Kola on the river Rupnarayan, and at Chanditala on the river Damodar. Every Dharamsala was built pucca throughout and consists of two very spacious rooms, one a large hall and another a massive room sub-divided into a large number of compartments to accommodate different families. Every building was provided with a courtyard and a tank and trees were planted in the courtyard and on all sides of the building. Each Dharamsala could accommodate more than five hundred pilgrims. In the days long before the construction of Railways, these Dharamsalas were the only places of shelter for the pilgrims proceeding to and from Puri. ... Each occupied an area varying from three to five acres of land and all these areas were recorded rent free in the Provincial Settlement of 1840."[3] None of these *dharamsālās* is extant in the district now and their preceding description would also appear to be slightly exaggerated.

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[1] O'Malley and Chakravarti—op. cit. pp. 123-4.

[2] B. Chatterjie—A Short Sketch of Maharaja Sukhmoy Roy Bahadur and His Family. Calcutta, 1910. pp. 6-8.

[3] ibid.

Dak bungalows, Inspection bungalows etc.

Writing about the staging bungalows in the district, O'Malley and Chakravarti observed in the old Howrah District Gazetteer: "The District Board maintains three inspection bungalows at Domjur, Jagatballavpur and Syampur. The Public Works Department keeps up one dak bungalow at Uluberia; three embankment bungalows at Amta and Mahishrekha on the Damodar and at Sasati on the Rupnarayan; and two drainage bungalows at Rajapur and Sijberia. The staging bungalow at Mahishrekha, the old subdivisional headquarters, is a particularly good building for a staging bungalow, being built on a high plinth and having 4 rooms."[1] Since then many rest houses for touring officials or the general traveller have been constructed by the Government, the Zilla Parishad, the Hooghly Irrigation Division, the Rupnarayan Bridge Special Roads Division, and the Uluberia Special Roads Division. The existing dak bungalows in the district are briefly described below.

The Uluberia Dak Bungalow situated at Uluberia and connected with the Uluberia railway station on the Howrah-Kharagpur section of the South Eastern Railway by a motorable road, is under the control of S.D.O., Uluberia.

The Singti Dak Bungalow can be reached from the Ichhanagari railway station on the Howrah-Champadanga section of the Howrah-Amta Light Railway by proceeding along a road which is metalled for about 9·6 km. up to Bakpotaghat on the left bank of the Damodar, while the remaining 3·2 km. are jeepable in fair weather. It is under the control of the Chairman, Zilla Parishad, Howrah.

The Sijberia Inspection Bungalow is charmingly situated on the right bank of the Bhagirathi and is connected with the Phuleswar railway station on the Howrah-Kharagpur section of the South Eastern Railway by a motorable road about 0.8 km. long. The place is also touched by the Calcutta-Bombay Highway from which the bungalow can be reached by a jeepable country road. The Executive Engineer, Hooghly Irrigation Division, is responsible for its maintenance. He also controls the following inspection bungalows and rest sheds. (1) Mahishrekha Inspection Bungalow can be reached from Kulgachhi railway station on the Howrah-Kharagpur section of the South Eastern Railway along a motorable road 3·2 km. long. Bus and rickshaw services are available from the railway station. (2) Sibganja Inspection Bungalow, beautifully situated on the right bank of the Bhagirathi, is 8 km. to the south-east of Syampur and is connected with Bagnan by the Bagnan-Sibganja bus service. (3) Mankur Inspection Bungalow is situated on the Rupnarayan, 9·6 km. to the west of Bagnan railway station and is connected with the latter place by a motorable road. Taxi service is available from the railway station. (4) Amta Inspection

[1] O'Malley and Chakravarti—op. cit. p. 121.

Bungalow is connected with the Amta railway station (terminus of the Howrah-Amta Light Railway) by a motorable road about 1·6 km. long. (5) Dakshin Bari Inspection Bungalow is very close to the railway station of the same name on the Howrah-Amta Light Railway. (6) Ulughata Inspection Bungalow is approachable from the Uluberia railway station by proceeding for 19·2 km. along the Uluberia-Syampur Road. (7) Uluberia Rest Shed is connected with the Uluberia railway station by a motorable road. (8) Sasati Rest Shed is situated on the Rupnarayan, 12·8 km. to the south of Bagnan railway station and is connected with it by a motorable road. Bus and taxi services are available.

Naupala Inspection Bungalow, beautifully situated on the left bank of the Rupnarayan, is connected with the Deulti railway station by a motorable road 3·2 km. long. It is under the care of the Executive Engineer, Rupnarayan Bridge Special Roads Division. The Executive Engineer, Uluberia Special Roads Division looks after a Rest Shed at Uluberia which is connected with the Uluberia railway station by a motorable road.

Hotels

There is no European style hotel in the district. The Indian style hotels at the district and subdivisional headquarters or at the pilgrim centres are usually small establishment with mediocre catering and poor sanitary arrangements. The retiring rooms at Howrah railway station, and the Asoka Hotel and the Bhimsen Hotel near it are somewhat better than the average. Eating houses thrive at all places attracting the litigant public, transport workers or general travellers but their standards are generally poor.

Activities of travel agents, guides etc.

Tourist facilities are meagre in the district. Activities of travel agents and guides are hardly noticeable. The conducted bus trips arranged by the State Tourist Bureau, not separately but along with the 'See Calcutta' trips, are limited so far to only four places in the district, namely Belur Math, Sibpur Botanic Garden, Howrah Railway Station and the Howrah Bridge.

POSTS & TELEGRAPHS AND TELEPHONES

Although our knowledge of the postal system in the Muslim period is scanty, it may, however, be said that the *harkarā* or the postal runner system of the East India Company was perhaps no better than the old *Nizāmat Dāk*. From the time of Clive to that of Bentinck the post office was not regarded as a department of public utility. 'Receivers' carried private mail for a consideration and this arrangement inaugurated postal communications on a commercial basis. Private organizations for carrying letters flourished even after 1837 when the Post Office Act (Act XVII of 1837) was passed. A private enterprise called *Mahājan Dāk* carried mail cheaper than the Company runners and thus the intention of the Government to have a State monopoly in postal communications was largely defeated. There was no fixed schedule of rates and licences were issued to

private operators in spite of the aforesaid Act.[1] Until the opening of the railways in 1854 the official postal system continued to compete with private organizations. Harimohan Sen, Dewan of the Bank of Bengal from 1844 to 1849, had floated with his own resources in the middle of the 19th century a horse dak company for carrying mail between Calcutta and Delhi and the route passed through Howrah district.[2]

Around 1844 an official postal organization connecting the district headquarters with outlying revenue and police stations and controlled by the Collector through his subordinates came into existence in Howrah district.[3] The expenditure was met by a cess levied on zemindars and local people supplemented by a Government subsidy. Delivery of letters was effected through the police and village *chowkidārs*. The nature of service varied from area to area and charges were levied in cash without reference to a standard table of rates. This left the public entirely at the mercy of unscrupulous postal officials. On October 1, 1854, the first postage stamp was issued on an all India basis. In the same year the postal department was also recognized as a separate organization of national importance. A manual of rules based on the report of a commission appointed in 1850 was prepared on which rests the entire fabric of the present-day Indian postal administration. Although the decision to absorb the district postal services into the general postal system had been taken as early as in 1862, it took many more years before the former was finally abolished.[4] In Bengal it took no less than 44 years for all the district post offices to come under the Provincial postal system. The date of the change over in Howrah district is not definitely known. From Oldham's account[5] of rates charged by *dāk* bearers (who carried mail in palanquins), we learn that postal communication was very costly at that time—about eight annas per mile (31 Paise per 1 km.). It was the Postmaster-General who published the rates in respect of the old military roads which remained in force even after the Grand Trunk Road came to be used in its stead and till the introduction of other modes of conveyance superseding the use of palanquins. The dak stages within the Howrah-Hooghly district along the route to Upper India were as follows. After crossing the Bhagirathi between Calcutta and Salkia, the road ran north-west through Kalipur practically following the alignment of the present Howrah-Seakhala Light

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[1] Mulk Raj Anand (Ed.)—Story of the Indian Post Office. 1954 p. 628.

[2] Lokenath Ghose—The Modern History of Indian Chiefs, Rajas, Zemindars, Native Aristocracies and Gentry. Calcutta, 1881. pp. 137-9.

[3] At that time Howrah and Hooghly constituted a single administrative district.

[4] Mulk Raj Anand (Ed.)—op. cit. pp. 8 & 55.

[5] C. E. A. W. Oldham—"Routes Old and New From Lower Bengal 'Up the Country' ", in Bengal Past and Present, Vol. 30, Part I, No. 59, July to September, 1925. pp. 18-31.

Railway, crossed the Damodar near Champadanga and then proceeded west beyond the district.

By 1871 almost every town having a population of 5,000 or more was provided with a post office or a 'Receiving House'. Cheap inland and foreign post cards were introduced in 1879 and remittances through money orders became operative in a number of select post offices in the following year. In 1883 telegraphic communications began to be handled by post offices. "The returns for 1907-08", writes O'Malley and Chakravarti in the old Howrah District Gazetteer, "show that there are 70 post offices and 189 miles of postal communication. The number of postal articles delivered in the same year, including letters, post cards, packets, newspapers and parcels was 54,31,000. The value of money orders issued was Rs. 34,51,000 and of those paid Rs. 17,86,000; while the number of Savings Bank deposits was 17,200, the amount deposited being Rs. 8,49,000. Postal telegraph offices have been opened at Howrah, Ross Road, Salkhia, Sankrail, Andul-Mauri, Sibpur, Sibpur Botanic Garden, Uluberia and Liluah."[1]

Present post and telegraph facilities

A fair idea of the recent expansion of postal facilities in Howrah district can be had from the following table[2] showing the number of post offices of different categories, functioning just before Independence and opened after it.

	Head Office	Sub-Office	Branch Office
Existing before Independence	1	30	74
Opened after Independence	–	32	128

A Planwise statement of the 32 Sub-Offices and 128 Branch Offices opened after Independence is given below:

Period	Sub-Office	Branch Office
First Plan	8	61
Second Plan	10	33
Third Plan	14	34

A thanawise distribution of the different categories of post offices (their respective names have been given at the end of the chapter as an appendix) in the district is given below:

Name of Police Station	Head Office	Sub-Office	Branch Office
Howrah	1	1	—
Amta	—	1	29

(contd.)

[1] L. S. S. O'Malley and Monmohan Chakravarti—op. cit. p. 127.
[2] Statistics used in this and other tables of this section have been furnished by the Senior Superintendent of Post Offices, Howrah.

Name of Police Station	Head Office	Sub-Office	Branch Office
Bagnan	—	2	28
Baly	—	5	5
Bantra	—	3	—
Bauria	—	3	3
Domjur	—	3	19
Golabari	—	6	—
Jagachha	—	5	2
Jagatballavpur	—	3	11
Lilua	—	5	4
Malipanchghara	—	4	—
Panchla	—	—	19
Sankrail	—	3	13
Syampur	—	2	29
Sibpur	—	12	—
Uday Narayanpur	—	2	14
Uluberia	—	2	26
Total	1	62	202

Besides these 265 post offices there are 27 non-delivery Sub-Offices in the district of which 22 are in Howrah, 2 in Baly, 2 in Lilua and one in Jagachha. A departmental telegraph office works at Howrah.

The workload of the Howrah Postal Division will be evident from the following table giving the average number of various postal items handled by it per month.

Money orders issued	81,073
Money orders paid	42,886
Registered letters booked	50,582
Registered parcles booked	6,133
Insured letters booked	10,051
Insured parcels booked	480
Broadcasting Radio Licence issued (in a single year)	7,092

The first manual telephone exchange in Howrah district was opened by the Bengal Telephone Corporation, now defunct. This exchange was taken over by the Posts and Telegraphs Department on April 1, 1943 with 989 exchange lines and 1,259 telephones. Since then 4 telephone exchanges have been set up in the district by the

Calcutta Telephone authorities the details of which are shown in the following table.

TELEPHONE EXCHANGES IN HOWRAH DISTRICT UNDER CALCUTTA TELEPHONE AUTHORITIES AS ON MARCH 31, 1967

	Exchange No. '66'	Exchange No. '67'	Andul Exchange	Uluberia Exchange
Equipped capacity	3,700	3,400	200	50
Working connexions	3,098	2,701	156	48
No. of telephones	4,016	3,385	193	59
No of P.B.Xs	106	43	4	2
No. of public call offices	35	33	3	1

The approximate investment made for installation of lines and cables, apparatus and plants is Rs. 50,00,000 (excluding cost of land and buildings) and the approximate annual return is Rs. 39,84,000.[1]

Besides these four exchanges, there are two more under the Post-Master General, West Bengal Circle, one of which was opened at Bagnan on November 30, 1962 and the other at Amta on December 27, 1964. Detailed statistics correct up to 31.7.67 and 30.6.67 for Bagnan and Amta Exchanges respectively are given in the following table.[2]

TELEPHONE EXCHANGES IN HOWRAH DISTRICT UNDER POST & TELEGRAPHS DEPARTMENT: JUNE-JULY 1967

	Bagnan Exchange	Amta Exchange
Equipped capacity	50	50
Working connexions	39	30
No. of telephones	42	30
No. of P.B Xs	—	—
No. of public call offices	3	1

ORGANIZATION OF OWNERS & EMPLOYEES

Following is a list of transport employees' organizations in the district which are registered under the Trade Union Act; the owners have no such association in the district.

Sl. No.	Regd. No.	Date of Registration	Name and Address of the Union	Membership
1.	6359	17.8.65	Allied Transport Co. Employees Union; Sibpur, Howrah.	16
2.	3416	6.5.55	Domjur Bus Workers' Union; 151 Narasimha Datta Road, Howrah.	56

[1] Source: General Manager, Calcutta Telephones.
[2] Source: Offices of the Divisional Engineers, Posts & Telegraphs, City and West.

Sl. No.	Regd. No.	Date of Registration	Name and Address of the Union	Membership
3.	3092	25.5.54	Eastern Railwaymen's Congress; 6 Church Road, Howrah.	60,673
4.	4595	2.5.59	Eastern Railway Employees' Congress; 3 Heghet Mansion, Howrah.	31,681
5.	4506	21.1.59	Howrah Zilla Bus Karmi Parishad; 4/1 Babu Muktaram Debnath Lane, Santragachhi, Howrah.	60
6.	1368	23.2.48	Kadamtala Bus Workers' Union; 151 Narasimha Datta Road, Howrah.	215
7.	2679	31.1.53	Light Railway Employees' Union; Howrah Maidan Rly. Station. Howrah.	476
8.	5036	14.10.60	Railway Godown Workers' Union; 4 Nityadhan Mukherji Road, Howrah.	244
9.	2462	16.8.52	Railway Licensed Porters' Union; 4 Nityadhan Mukherji Road, Howrah	757
10.	5671	—	Road Transport Mazdoor Union; 286 G. T. Road (South), Howrah.	72
11.	5002	19.9.60	Sankrail Thana Ricksaw Sramik Union; Andul, Howrah.	84
12	3448	12.11 55	South Eastern Railwaymen's Congress; 6 Church Road, Howrah.	36,143
13.	6350	29.7.65	Uluberia Subdivisional Motor Transport Workers' Union; Bagnan Congress Office, P.O. Bagnan, Howrah.	104

APPENDIX—A

PASSENGER AND GOODS TRAFFIC DURING 1964-66 AT STATIONS ON EASTERN RAILWAY WITHIN HOWRAH DISTRICT

Railway Stations	Year	No. of inward passengers (in lakhs)	No. of outward passengers (in lakhs)	Earnings (in lakh rupees)	No. of monthly tickets (in lakhs)	Earnings (in lakh rupees)	Volume of out-ward goods (in lakh quintals)	Earnings (in lakh rupees)	Volume of inward goods (in lakh quintals)	Earnings (in lakh rupees)
Howrah (including Howrah goods)	1964	219.11	142.33	580.56	1.15	10.17	53.98*	456.18	60.89	392.87
,,	1965	126.42	141.88	589.96	1.27	10.92	46.97	423.02	75.96	466.36
,,	1966	115 65	137.90	611.45	1.28	10.34	46.23	423.23	73.02	470.94
Sibpur Char (Goods)	1964	—	—	—	—	—	1.73	9.25	7.30	18.36
,,	1965	—	—	—	—	—	2.08	10.34	7.15	15.55
,,	1966	—	—	—	—	—	2.26	13.18	8.14	22.46
Ramkristapur (Goods)	1964	—	—	—	—	—	16.02	35.75	11.70	85.93
,,	1965	—	—	—	—	—	13.86	11.52	26.08	84.48
,,	1966	—	—	—	—	—	11.56	13.63	22.59	86.21
Lilua	1964	6.38	11.09	4.40	0.42	1.27	8.08	42.99	16.91	45.66
,,	1965	9.32	15.63	4.69	0.35	1 07	4.32	28.93	12.07	31.60
,,	1966	8.49	13.62	4.09	0.30	0.90	3.18	23.36	13.12	33.08
Belur	1964	2.14	7.35	2.20	0.39	1.43	3.75	29.55	6.92	17.51
,,	1965	2.11	9.47	2.48	0.39	1.42	2.65	17.21	6.81	15.03
,,	1966	1.83	6.53	2.41	0.37	1.28	1.22	4.94	3.00	7.01
Baly	1964	1.80	6.48	3.52	0.30	1.14	3.91	0.47	8.65	22.27
,,	1965	1.76	6.26	3.28	0.30	1.18	2.32	0.23	10.30	28.88
,,	1966	1.57	5.70	3.64	0.23	0.99	1.07	7.77	10.14	32.44
Belanagar	1964	0.11	0.42	0.10	2.20	0.17	—	—	—	—
,,	1965	0.12	0.46	0.12	1.92	0.17	—	—	—	—
,,	1966	0.23	0.49	0.15	1.51	0.15	—	—	—	—
Balyghat	1964	—	2.82	—	0.18	—	—	—	—	—
,,	1965	—	2.32	—	0.14	—	—	—	—	—
,,	1966	—	2.88	—	0.18	—	—	—	—	—

PASSENGER AND GOODS TRAFFIC DURING 1964-65 & 1965-66 AT STATIONS ON SOUTH EASTERN RAILWAY WITHIN HOWRAH DISTRICT

Railway Stations	Year	No. of outward passengers (in lakhs)	Earnings (in lakh rupees)	Volume of outward goods (in thousand quintals)	Earnings (in thousand rupees)	Volume of inward goods (in lakh quintals)	Earnings (in lakh rupees)
Ramrajatala	1964-65	15.99	2.23	—	—	—	—
	1965-66	13.69	2.31	—	—	—	—
Santragachhi	1964-65	10.71	1.93	42.28	74.36	5.06	7.82
	1965-66	11.96	1.70	81.86	61.97	5.19	9.81
Moungram	1964-65	12.08	1.92	—	—	—	—
	1965-66	11.59	2.22	—	—	—	—
Andul	1964-65	19.88	4.01	13.06	23.75	3.91	4.22
	1965-66	17.10	4.06	25.15	85.45	3.12	4.18
Sankrail	1964-65	8.57	1.38	12.79	6.22	2.68	4.23
	1965-66	8.22	1.43	8.62	5.61	2.18	3.79
Abada	1964-65	1.33	0.22	—	—	0.09	0.11
	1965-66	1.35	2.23	—	—	—	—
Nalpur	1964-65	10.59	1.54	3.14	25.59	1.44	4.86
	1965-66	10.57	1.71	2.19	19.52	1.76	8.94
Bauria	1964-65	14.42	4.71	31.20	30.27	5.58	11.54
	1965-66	14.97	4.94	21.71	18.46	5.82	2.03
Fort Gloster (Goods)	1964-65	—	—	40.69	59.34	3.34	5.77
	1965-66	—	—	10.09	38.07	3.97	10.60
Chengail	1964-65	9.12	2.53	1,559.77	194.51	1.67	2.08
	1965-66	9.01	2.76	—	—	1.30	1.64
Phuleswar	1964-65	6.44	1.91	651.44	4,5[illegible]8.97	10.49	21.38
	1965-66	6.52	1.78	286.50	1,631.74	4.45	8.70
Uluberia	1964-65	13.67	3.99	32.03	207.81	3.11	5.46
	1965-66	14.42	4.43	30.65	76.16	2.97	5.37
Bir-Sibpur	1964-65	4.94	0.92	—	—	—	0.03
	1965-66	4.82	1.00	—	—	0.03	0.08
Kulgachhia	1964-65	10.21	2.63	1.96	6.42	0.87	0.97
	1965-66	6.53	2.91	—	—	0.02	0.03
Bagnan	1964-65	22.06	9.55	1.82	2.07	4.85	5.75
	1965-66	25.15	11.89	5.00	1.90	2.94	3.18
Deulti	1964-65	10.05	2.57	4.88	10.88	1.05	1.45
	1965-66	10.73	2.89	4.34	35.86	0.15	0.36

APPENDIX—B

LIST OF POST OFFICES (OF VARIOUS CATEGORIES) IN HOWRAH DISTRICT

HEAD OFFICE: Howrah

SUB-OFFICES:

Howrah P.S.—Pachalbazar (P, ND), Ramkrishnapur (P, T, ND);

Amta P.S.—Amta (P, T);

Bagnan P.S.—Bagnan (P, T), Mugkalyan (P, T);

Baly P.S.—Baly (P, T), Baly Seed Store (P, ND), Belur Math (P, T), Mohanlal Bahalwalla Road (ND), Victoria Cotton Mill(P, ND);

Bantra P.S.—Circular Road (P, ND), Ichhapur Road (ND), Kadamtala (P, ND);

Bauria P.S.—Bauria (T), Chackasi (T), Fort Gloster;

Domjur P.S.—Andul-Mouri (P, T), Domjur (P, T), Makardaha (P);

Golabari P.S.—Hooghly Docks (P, ND). Howrah R.S. (P, T, ND), Qumaresh (P, ND), Ross Road (P, T, ND), Salkia (P, T);

Jagachha P.S.—Baltikuri, Dasnagar (P, T), Jagachha, Old Jagachha (ND), Santragachhi (P, T);

Jagatballavpur P.S.—Bargachhia (T), Jagatballavpur, Munshihat (T);

Lilua P.S.—Bhattanagar, Abhoy Guha Road (ND), Bamangachhi (P, ND), Lilua (P, T), Sibtala (ND);

Malipanchghara P.S.—Dharmatala Road (ND), Ghusuri (P, T), Howrah Loco Depot (P, ND), Jagriti (P, ND);

Sankrail P.S.—Delta Mill, Goaberia (ND), Sankrail (P, T);

Syampur P.S.—Anantapur (P), Syampur (T);

Sibpur P.S.—Andul Road (ND), Bataitola (P, ND), Botanic Garden (P, T), Baksara, Chatterji Hat (P, ND), Debendra Ganguly Road (ND), Dinabandhu Institution (P, ND), Keorapara (P, ND), Khurut Road (P, ND), Ola Bibitola (ND), Shalimar (ND), Sibpur (P, T);

Uday Narayanpur P.S.—Pacharul, Uday Narayanpur (T);

Uluberia P.S.—Chengail, Uluberia (P, T).

BRANCH OFFICES:

Amta P.S.—Anulia*, Bankura-Howrah, Bhandargachha, Debandi*, Deora, Dhurkhali, Gazipur*, Jaypur Fakirdas*, Jhantia*, Jhikira*, Kankrol*, Kanpur*, Kashmali, Khalna*, Khasmahal Balichak*, Khorop*, Khosalpur*, Kumarchak, Manikura*, Mato*, Narit*, Nawpara, Panpur*, Raspur*, Saltighat Gujarpur, Sonamui, Tajpur, Thalia*, Udang*;

Bagnan P.S.—Agunshi*, Baidyanathpur*, Bainan*, Bakshi, Bangalpur*, Bantul*, Barunda*, Benapur Chandanpara*, Birampur, Chakur*, Deulgram*, Deulti*, Hallyan*, Harop, Haturia*,

LIST OF POST OFFICES (OF VARIOUS CATEGORIES) IN HOWRAH DISTRICT—*contd.*

Kalyanpur*, Kantapukur*, Khadinan, Kulüpara*, Mankur*, Mellak*, Nawpala*, Olanpara, Orphuli*, Panitras*, Rabibhog, Ramchandrapur*, Rupasgori;

Baly P.S.—Abhoynagar, Durgapur, Durgapur Samabay Pally, Ghosepara*, Sapuipara;

Bauria P.S.—Burikhali*, Rameswarnagar, Santoshpur;

Domjur P.S.—Baluhati*, Bankra, Begri*, Bhandardaha, Biprannapara, Dafarpur*, Dakshin Jhapardaha*, Keshabpur, Khasmora, Khatora, Kolora*, Narna, Nibra, Nonakundu, Parbatipur, Rudrapur, Tentulkuli, Uttar Jhapardaha, Wadipur;

Jagachha P.S.—Dharsa (ND), Unsani*;

Jagatballavpur P.S.—Dakshin Santoshpur, Barbalia, Gobindapur Sibtala, Hantal Anantabati, Islampur, Patihal*, Polgustia, Maju*, Naskarpur*, Sealdanga*. Sidheswar;

Lilua P.S.—Chamrail*, Jagadishpurhat*, Joypurbill, Kona*;

Panchla P.S.—Beldubi, Belkulai, Bikihakola, Banharishpur*, Deulpur*, Dhumki*, Gangadharpur*, Gondalpara, Jala Biswanathpur*, Jalalsi, Jainagar*, Jujersha*, Kuldanga*, Panchla, Paniara*, Raghudebbati, Sahapur, Subharara*;

Sankrail P S.—Argori, Banipur*, Dhulagori*, Duillya*, Hirapur*, Jhorhat*, Kendua*, Mashila, Nalpur, Podra, Radhadasi, Sankrail Dakshinpara, Sarenga;

Syampur P. S.—Ajodhyahat, Alipur Howrah. Amardaha*, Baganda*, Bargram*, Bargarchumbak, Belari, Dakshin Durgapur*, Deody*, Dihimandalghat*, Dingakhola*, Ganeshpur*, Gobindapur, Gohalberia, Gujarpur*, Gurepole, Jallabaj, Jhumjhumi, Kharuberia*, Kotra, Kultikari*, Mollahat, Nabagram Sikipur*, Nakole*, Pichhaldaha, Radhapur*, Ramnagar*, Sasati*, Sibganj*, Uttar Durgapur*;

Uday Narayanpur P.S.—Borda*, Chitrasenpur*, Gourangachak*, Harali, Harishpur*, Kanupath Majhpara, Khila*, Penro*, Raichak, Rampur, Singti Sibpur*, Sonagachhi*, Sonatola, Uttarmanasri*;

Uluberia P.S.—Bahira, Baniban*, Banitola, Basudebpur, Birsibpur*, Brindabanpur, Dakshin Ramchandrapur, Dhulasimla*. Phuleswar*, Gutinagari. Jaduberia, Jagadishpur, Joargori*, Kaijuri. Kantaberia, Khalisani*, Khaira, Kushberia, Latibpur*. Mahishrekha*, Pirpur*, Raghudebpur, Samruk, Sijberia, Sumda, Tehatta.

NOTE : In this table, Post Office marked with 'P' are Public Call Offices; with 'T' Telegraph Offices; with 'ND' Non-delivery Offices and with asterisks Branch Offices empowered to function as Sub-Offices.

WEST
DAMODAR R.
AMTA
BAGNAN
SYAMPUR
RUPNARAYAN R
PREPARED BY
DILIP K. KHAN

PERCENTAGES OF WORKERS AND NON-WORKERS IN HOWRAH DISTRICT

	Total Workers	Livelihood Class[1] I	II	III	IV	V	VI	VII	VIII	IX	Non-Workers (Percent)
District Total	30.88	4.41	2.94	.51	1.00	11.14	.62	3.76	2.00	4.50	69.12
Rural Total	26.80	7.31	4.78	.69	1.28	6.16	.53	2.19	.72	3.14	73.20
Urban Total	36.88	.13	.24	.22	.60	18.47	.76	6.06	3.88	6.52	63.12

Occupational classification of non-agricultural workers

The non-agricultural workers of the district are classified according to their occupations in the following table which shows the relative importance of the various callings.

Occupational Categories	Total	Males	Females
Professional, technical and allied workers	20,767	19,047	1,720
Administrative, executive and managerial workers	8,828	8,761	67
Clerical and allied workers	39,196	38,882	314
Sales workers	66,771	63,809	2,962
Farmers, fishermen, hunters, loggers and allied workers	11,886	11,429	457
Miners, quarrymen and allied workers	77	33	44
Workers in transport and communications	19,307	19,218	89
Craftsmen, production process workers and labourers not classified elsewhere	2,70,078	2,60,820	9,258
Service, sport and recreation workers	35,426	29,235	6,191
Workers not classified by occupation	7,353	7,196	157
Grand Total	4,79,689	4,58,430	21,259

Numerical details of the various categories of non-working population of the district are given in the following table.

(In Thousands)

Categories of non-working population	District total Males	District total Females	Rural total Males	Rural total Females	Urban total Males	Urban total Females
Total	521.58	887.2	313.7	574.5	208.1	312.7
Full-time students	169.8	93.8	95.5	46.0	74.3	47.7
Persons in household duties	—	425.7	—	280.0	—	145.7

(contd.)

[1]*vide* Livelihood classes mentioned in the previous table.

(In Thousands)

Categories of non-working population	District total Males	District total Females	Rural total Males	Rural total Females	Urban total Males	Urban total Femles
Dependents, infants and disabled	295·8	356·8	195·5	241·7	100·3	115·1
Retired, rentier or persons with independent means	13.2	—	4.9	1.7	8.3	1.8
Beggers, vagrants etc.	3.5	6.0	2.4	4.7	1.1	1.2
Inmates of penal, mental and charitable institutions	.9	.2	.6	.2	.3	.04
Persons seeking employment for the first time	21.8	.9	8.3	.1	13.5	.8
Persons employed before but now out of employment and seeking work	16.8	.4	6.5	.1	10.3	.3

The proportion of workers in the district has declined considerably over the last four decades with consequent rise in that of the non-workers. It dropped from 37.79% in 1921 to 29.68% in 1931 and, after registering a slight increase in 1951 when it accounted for 34.60%, fell again to 30.88% in 1961. The proportion of agricultural workers (cultivators and agricultural labourers taken together) also underwent significant reduction during the same period. Cultivators who formed 21.65% of the total workers in 1921 accounted for only 14.28% in 1961 while the proportion of agricultural labourers dropped from 13.89% to 9.52% over the same period. The proportion of workers engaged in manufacturing and household industries showed an increase from 34.53% in 1921 to 39.33% in 1961.

Occupational shifts

The occupational shifts noticed in the district over the last four decades are shown in the following table which gives the absolute numbers of workers according to different categories as also their percentages (shown within brackets) for the years 1921, 1931, 1951 and 1961.

STATEMENT SHOWING OCCUPATIONAL SHIFTS IN HOWRAH DISTRICT IN ABSOLUTE AND PERCENTAGE FIGURES

Category of workers	1921	1931	1951	1961
Total workers	3,76,886 (100.00)	3,26,188 (100.00)	5,57,503 (100.00)	6,29,519 (100.00)
Cultivators	81,547 (21.65)	51,682 (15.83)	79,444 (14.24)	89,828 (14.28)
Agricultural labourers	52,323 (13.89)	56,891 (17.42)	60,391 (10.84)	60,002 (9.52)

(contd.)

STATEMENT SHOWING OCCUPATIONAL SHIFTS IN HOWRAH DISTRICT IN ABSOLUTE AND PERCENTAGE FIGURES—*contd.*

Category of workers	1921	1931	1951	1961
Mining, Quarrying, Livestock, Forestry, Fishing, Hunting etc.	10,475 (2.78)	11,575 (3.57)	7,317 (1.32)	10,296 (1.65)
Manufacturing, including Household Industry	1,30,191 (34.53)	99.158 (30.40)	1,86,091 (33.38)	2,47,482 (39.33)
Construction	10,443 (2.78)	9,720 (3.00)	8,614 (1.53)	12,687 (2.00)
Trade & Commerce	36,125 (9.58)	46,250 (14.18)	78,885 (14.16)	76,590 (12.18)
Transport, Storage and Communications	15,908 (4.20)	13.660 (4.18)	47,920 (8.60)	40,708 (6.47)
Other services	39,874 (10.59)	37,252 (11.42)	88,841 (15.93)	91,906 (14.57)

General level of prices

Prices of rice, the staple food-crop of the district, as available from 1898 onwards, registered a steady rise which, after a decade's slump during the thirties of this century, became sharp and pronounced with the outbreak of the Second World War. The following table[1] will indicate the trend during the period from 1898 to 1938.

Average of years	Centre: Howrah Sadar (seers of rice per Rupee)	Centre: Uluberia (seers of rice per Rupee)
1898-1902 (5 years)	11.5	11.7
1903-1907 (5 ,,)	10.3	10.5
1908-1913 (6 ,,)	10.3	11.3
1914-1918 (5 ,,)	7.6	7.9
1919-1928 (10 ,,)	5.8	6.0
1929-1938 (10 ,,)	9.4	10.4

The war pushed up prices beyond the reach of the common man causing the terrible famine of 1943 when prices of rice rose to about 800% above those prevailing in 1939[2] (viz. Rs. 3-2-7 per maund at Howrah Sadar and Rs. 4-1-0 per maund at Uluberia). The alarming situation called for stringent Government control over procurement and distribution of foodgrains etc. Statutory rationing in rice, wheat, wheat products, sugar etc. was introduced in the municipal areas of Howrah and Baly, and modified rationing in other areas of the district with effect from January, 1944. By the end of 1943, prices of rice came down to Rs. 19-13-9 per maund at Howrah Sadar and Rs. 17-3-2 per maund at Uluberia.[3] The harvesting of a good winter crop together with low prices obtaining at ration shops brought the prices

[1-3] Price Lists of Staple Food-crops in the Local Areas of Bengal.

in open markets further down to Rs. 16-1-5 per maund at Howrah Sadar and Rs. 16-0-0 per maund at Uluberia in 1944, while the average for the years 1944-1947 at those centres stood at Rs. 15-14-10 and Rs. 15-11-3 per maund respectively.[1] But from 1948 prices again began to move upwards reaching the unprecedented level of Rs. 38-8-3 per maund in the non-rationed areas of Howrah Sadar and Rs. 32-0-0 per maund at Uluberia[2] early in 1952 in spite of far more stringent measures adopted by the Government during 1948-51. However, the special emphasis accorded to agriculture in the First Five Year Plan and timely rains began to bear fruit by the end of 1952. Consecutive good harvests resulted in the recession of prices permitting withdrawal of rationing from June, 1954. Prices in the open market then stood almost at the same level as in ration shops (Rs. 17-8-0 per maund at ration shops and Rs. 17-9-4 and Rs. 16-2-8 per maund in the open markets of Howrah Sadar and Uluberia respectively).[3] Prices, however, did not stay at this level for long but started spiralling again from the middle of 1956 reaching a climax in November 1963 when prices per quintal ruled as high as Rs. 84.66 to Rs. 89.33 for fine, Rs. 82.00 to Rs. 89.33 for medium and Rs. 79.33 to Rs. 89.33 for coarse varieties in different wholesale markets of the district.[4] This neccssitated the re-imposition of price control from January 8, 1964, re-introduction of statutory rationing in the municipal areas of Howrah and Baly from January 5. 1965 (which was subsequently extended to cover the Jagachha P.S. from 22.2.1966), enforcement of restrictions on the storage, movement and consumption of essential foodstuffs. Compulsory levy of rice and paddy at controlled prices was introduced with effect from December 1, 1965. Even then prices continued mounting to dizzy heights owing to a serious shortfall in agricultural production, both of foodgrains and commercial crops in the country during 1965-66, says a report of the Reserve Bank of India on currency and banking for 1965-66.[5] The report further states that during the Third Plan period the price-level in the country advanced by 35.2% on top of a rise of 30% during the Second Plan.[6] The consumer Price Index Number (General) for the industrial workers of the district rose from 100 in 1960 to 132 in 1965.[7] The following two tables indicating the prices of various agricultural produce during the agronomically significant months of January, April and August of 1956, 1961 and 1966[8] as also the Index Numbers of retail prices of selected food articles in the district during 1956, 1961 and 1965[9] reflect this general trend.

[1-3] Price Lists of Staple Food-crops in the Local Areas of Bengal.
[4] Source: Directorate of Agricultural Marketing, Government of West Bengal.
[5-6] The Statesman, Calcutta Edition, dated 15.9.1966.
[7] Source: Labour Bureau, Government of India.
[8] Source: Directorate of Agricultural Marketing, Government of West Bengal.
[9] Source: State Statistical Bureau, Government of West Bengal.

TABLE I—WHOLESALE MARKET PRICES OF SELECTED AGRICULTURAL PRODUCTS IN SOME IMPORTANT MARKETS OF HOWRAH DISTRICT[1]

(Prices per quintal in Rupees)

Commodity	Market	1956			1961			1966		
		Jan.	April	Aug.	Jan.	April	Aug.	Jan.	April	Aug.
Paddy (medium)	Bakshihat	24.19	31.81	36.18	37.62	32.21	36.18	Prices controlled by Govt.		
Paddy (coarse)	,,	22.03	28.81	31.00	32.16	29.53	32.16	,,	,,	,,
Rice (fine)	Domjur	54.11	60.97	60.62	67.75	59.63	62.98	,,	,,	,,
Rice (medium)	Ramkrishnapur	47.25	51.59	58.96	62.98	56.42	60.97	,,	,,	,,
Rice (coarse)	Domjur	40.20	47.73	52.40	52.93	50.78	57.31	,,	,,	,,
Pulses (whole) Mung (ordinary)	Howrah Pulse Market	39.53	37.28	39.24	52.78	52.13	54.93	N.S.	—	101.90
Masur (big)	,,	42.21	42.21	51.83	44.88	36.64	42.20	N.S.	87.99	103.90
Masur (small)	,,	40.87	35.17	42.04	40.52	33.53	33.49	N.S.	74.12	80.38
Urid (big)	,,	45.56	51.59	57.46	55.09	49.06	54.92	88.41	78.88	N.A.
Urid (small)	,,	35.09	44.89	47.16	47.81	43.48	44.95	77.70	76.35	N.A.
Gram (big)	,,	34.17	32.00	37.03	49.06	39.43	43.08	N.S.	84.40	N.A.
Pulses (split) Mung (ordinary)	,,	49.59	48.42	51.59	66.64	67.17	69.03	N.S.	N.A.	122.75
Masur (big)	,,	47.91	47.91	52.59	46.89	42.87	48.23	N.S.	95.00	120.00
Urid (big)	,,	50.92	61.13	68.01	58.61	57.88	69.49	N.S.	N.A.	N.A.
Gram (big)	,,	40.20	41.21	45.56	55.42	47.91	50.39	N.S.	N.A.	N.A.
Jute (average grade)	Domjur	71.54	75.28	73.59	160.80	155.44	100.50	152.40	159.33	N.S.
Oil (mustard)	Kalibabur Bazar	...	182.25	221.10	269.34	230.48	236.12	340.00	376.00	402.75

[1]Directorate of Agriculture Marketing, West Bengal.
'N.A.' means—not available.
'N.S.' means—no supply.

TABLE II—INDEX NUMBERS OF RETAIL PRICES OF SELECTED FOOD ARTICLES IN HOWRAH DISTRICT[1]

Base: November 1956=100

Item	1956	1961	1965
Rice	114	121	144
Rice products	83	91	136
Wheat products	104	102	27
Mung	73	98	147
Masur	100	98	188
Kalai	92	99	128
Other pulses	83	95	173
Mustard Oil	89	101	141
Salt	92	100	101
Sugar	99	130	146
Potatoes	62	65	86

In February, 1967 retail prices of different varieties of rice at the ration shops of the district varied from 0.80 paise to Rs. 1.20 per kilogram[2] and the minimum and maximum prices of rice (fine variety) in the non-rationed area of Amta were Rs. 1.30 and Rs. 1.69 respectively during the same month.[3]

Rural wages

Wages for different operations in agriculture vary according to the nature of work. the strain involved, the duration of work and the conditions under which it is being performed.[4] Certain other factors like the supply of labour in the area, general prosperity and the scope for industrialization in the region, migratory habits of the labourers and their susceptibility to wages, industrial or otherwise, prevailing in the vicinity also play their part.[5] There is no doubt in the fact that the wages current in the highly industrialized north-eastern portion of the district strongly influence its rural wages. Another important aspect of wage structure in agriculture is the mode of payment. Wages are paid either in cash or in kind or partly in cash and partly in kind. The system of allowing some perquisites in addition to wages is also in vogue. As late as in 1909 the average daily wage of an agricultural labourer in the district varied from four to five annas (25 paise to 31 paise), besides a light midday meal of parched rice and tobacco, or one pice (2 paise) extra in lieu thereof.[6]

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[1] Source: State Statistical Bureau, West Bengal.
[2] Source: Food & Supplies Department, West Bengal.
[3] Source: Directorate of Agricultural Marketing, West Bengal.
[4] Report on the Second Agricultural Labour Enquiry, 1956-57, Volume II — West Bengal. Simla, 1961. p. 40.
[5] loc. cit.
[6] L. S. S. O'Malley & M. Chakravarti—op. cit. p. 91.

The permanent farm hands then received a monthly wage of 10 to 12 rupees or 3 to 5 rupees with food and clothing.[1] It was observed in 1956-57 that in the zone including Howrah district 51.57% of man-days work by adult casual workers was paid in cash, 12.87% in kind and 35.57% partly in cash and partly in kind.[2] In contrast, the survey report on the village of Mahisgot (Sankrail P.S.) highlighted the prevailing system of cash payment there. "Of the total wage bill in 1955-56, kind payment constituted only 0.5%. As the village is under the influence of cash nexus of urban areas and industrial establishments, the system of cash payment has attained such a high proportion."[3] The same survey report gives interesting statistics of wages prevailing in 1955-56 in the agricultural and non-agricultural fields which are reproduced in the following table[4] from which it would appear that industrial workers were much better off than agricultural labourers.

COMPARATIVE WAGE-RATES PREVAILING IN AGRICULTURE AND NON-AGRICULTURAL FIELDS AT MAHISGOT VILLAGE IN HOWRAH DISTRICT IN 1955-56

	Daily wage-rate (in Rs.)	Man days per worker
Agriculture		
Casual	1.47	130
Industry		
Permanent	2.20	—
Casual	2.10	180
Public Work		
Casual	2.10	100
House repairs		
Casual	1.63	85
Miscellaneous		
Non-agricultural work:		
Casual	1.50	106

In 1959 the State Government fixed for the first time minimum agricultural wages in terms of the Minimum Wages Act, 1948 which,

[1] loc. cit.

[2] Report on the Second Agricultural Labour Enquiry, 1956-57, Volume II—West Bengal. Simla, 1961. p. 40.

[3] Dr. J. P. Bhattacharjee and Dr. G. C. Mandal—Studies in Rural Change, No. 5, Mahisgot, West Bengal. (Unpublished) Report on a Socio-Economic Investigation (1956-57). Agro-Economic Research Centre, Santiniketan, 1958. para 8.4.

[4] ibid. para 8.8.

for the Howrah district, were 1.87, 1.75 and 1.12 rupees for adult males, adult females and children respectively. Besides, Re. 0.25 was to be allowed to adult males and females employed in specified operations like ploughing, harvesting and retting of jute. These cash wages were to be reduced by 50 paise for each principal meal (midday or night) supplied by the employers. When employed on a long term basis each adult, male or female, would get, besides two principal meals and accommodation, a monthly salary of Rs. 26 and each child Rs. 16. Traditional amenities like tobacco, breakfast etc. would continue in addition to these minimum wages.

During the decade 1956-65, wages of agricultural labour have increased substantially as would be evident from the following table.[1]

AVERAGE DAILY WAGES OF AGRICULTURAL LABOURERS IN HOWRAH DISTRICT FOR AN EIGHT-HOUR DAY DURING 1956, 1961 AND 1965

(Figures in Rupees)

	Field Labour			Other Agri. Labour			Herdsmen		
Year	Man	Woman	Child	Man	Woman	Child	Man	Woman	Child
1956	1.75	1.28	0.91	2.19	1.28	0.90	—	—	—
1961	2.03	1.47	1.07	2.42	1.50	1.11	—	—	—
1965	3.24	2.49	2.00	3.19	2.30	1.98	—	--	1 62

Agricultural wages prevailing in the Sadar and Uluberia subdivisions during the four quarters of 1966 are given in the table below.[2]

AVERAGE DAILY WAGES (IN RS.) OF AGRICULTURAL LABOURERS IN SADAR AND ULUBERIA SUBDIVISIONS DURING 1966

Quarter of 1966	Sadar	Uluberia	District Average
1st	3.17	3.67	3.42
2nd	3.46	3.50	3 48
3rd	3.25	3.00	3.13
4th	3.25	2.75	3.00

In actual practice, a sum of Rs. 3 is paid to an adult agricultural labourer in cash per day along with one *kunkey* (approximately 250 gms.) of *muḍi* (puffed rice) and one dozen *biḍis*. An additional amount of one rupee is usually paid at the time of sowing and harvesting.

[1] Source: Agriculture and Community Development Department, Govt. of West Bengal.
[2] Source: District Magistrate, Howrah.

Besides, *gur* (jaggery) locally prepared in Uday Narayanpur P. S. is given extra in that region. If the labourer supplies plough and bullocks himself the cash wages vary between 6 and 7 rupees per day.

Urban wages

Since the wage structure in organized industries cannot but influence that in the less organized sector, it is of considerable interest to study the emoluments pattern in such industries of the district as jute, cotton-textiles and engineering in which tens of thousands of workers are employed. As regards the jute industry, the Government of Bengal, while laying evidence before the Royal Commission on Labour in India (1931), opined that "in no industry in the world, situated in such a circumscribed area, is the wage position more inchoate. The mills, grouped under different managing agents, work under wage systems which have developed many idiosyncrasies during the long or short years of their existence. Even in mills under the same managing agents, there are differences which, to persons not acquainted with the position, seem incredible."[1] The exhortations of the Royal Commission, the awards of the three Jute Textile Tribunals of 1948, 1951 and 1955 followed by the recommendations of the Jute Wage Board (1959) went a long way towards standardization of wages in the jute industry. S. R. Deshpande in his 'Report on an Enquiry into Conditions of Labour in the Jute Mill Industry in India' (1946) gave the results of his findings about 21 jute mills in West Bengal as follows: "Taking all the workers in the selected occupations, it will be seen that the basic wages of 20.07 per cent lie within the wage group Rs. 2-8-0 to Rs 3-8-0 per week, of 40.63 per cent in the wage group of Rs. 3-8-0 to Rs. 5 per week, of 33.47 in the wage group of Rs. 5 to Rs. 8 per week and of 5.83 per cent within the wage group Rs. 8 to Rs. 9 per week and over."[2] The first Jute Textile Tribunal (1948) fixed the minimum emoluments of manual workers in certain specified departments, e.g. batching, spinning, winding, beaming etc. of 25 jute mills in Howrah district at Rs. 58-8-0 (basic wage Rs. 26 and dearness allowance Rs. 32-8-0) per month. It also prescribed standardized time-scales for clerks of Grade I (ordinarily graduates) at Rs. 70 to Rs 130 and of Grade II at Rs. 55 to Rs. 85 per month.[3]

Jute Industry

The second Tribunal in its award of 1951 enhanced the dearness allowance of all categories of jute workers from Rs. 32-8-0 to Rs. 37-6-0,[4] laid down a scheme of minimum basic wages for the three categories of durwans, prescribed time-scales for special and lower grade clerks and framed enhanced wage-rates for journeymen and mechanics.

[1] Report of the Royal Commission on Labour in India. London, 1931. p. 215.
[2] op. cit. p. 19.
[3] Awards made by Major Tribunals during 1948, Vol. III. Govt. of West Bengal, 1952. pp. 249-50.
[4] Awards made by the Tribunals for the Quarter ending December 1951, Department of Labour, Govt. of West Bengal. Calcutta, 1953. p. 1684.

The third Tribunal (1955) raised the basic wage of the lowest paid worker to Rs. 34.67 per month for a 48-hour week with a fixed but deflated dearness allowance of Rs. 32.50 per month applicable to all categories of employees including clerks, mechanics and durwans. The pay-scales of all grades of clerical staff were revised upward and an increase of 8 pies per hour was allowed to journeymen and mechanics.[1]

The Jute Wage Board whose recommendations covered all employees defined as 'workmen' under the Industrial Disputes Act, 1947 and all categories of clerks, apprentices and trainees found that on the basis of the existing wage structure the jute workers in West Bengal could be classified into eight categories according to the following monthly wages:[2] I–Rs. 34.67, II–Rs. 35.75, III–Rs. 36.84, IV–Rs. 37.92, V–Rs. 39.00, VI–Rs.40.09, VII–Rs. 41.17 and VIII–Rs. 42.25 and above. The Board reduced the number of categories to three by arranging that (*a*) the wages of all workers within the groups I to IV should be fixed at Rs. 40.17; (*b*) the wages of workers within the groups V to VII should be fixed at Rs. 41.17; and (*c*) the wages of workers in the group VIII and above will be more or less the same, i.e. 42.25 and above.[3] Besides recasting the basic wages as stated above, the Board allowed a general increment of Rs. 8.33 (including interim relief of Rs. 3.42) per month for all categories of workers (excepting clerical staff whose case was dealt with separately) and made provision for a variable dearness allowance which was to rise or fall by 20 paise per point of increase or decrease in the Working Class Consumer Price Index Number. (The amount of dearness allowance admissible in February, 1966 was Rs. 51.70 calculated on the basis of the corresponding Consumer Price Index Number of 425, taking 1939 as the base year).[4] The basic wage scales of clerical staff, on revision by the Board, stood as follows:[5] Grade II–Rs. 77 to Rs. 137; Grade I–Rs. 92 to Rs. 207; SB Grade–Rs 152 to Rs. 222 and SA Grade–Rs. 222 to Rs. 322.

Cotton textile industry

The two Cotton Textile Tribunals of 1948[6] and 1958[7] and the Central Wage Board on Cotton Industry of 1957 (whose recommendations became effective from 1.1.1960) fixed the wage structures of unskilled labourers and lowest-paid junior clerks as shown in the following table.

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[1] Award in the matter of industrial disputes in the Jute Textile Industry in West Bengal between 101 specified jute mills and their workmen, Govt. of West Bengal. Calcutta, 1955. pp. 72-73 and 133-35.

[2] Jute Wage Board, Chapter VII, para 7.53.

[3] ibid. para. 7.54.

[4] Dr. P. Chakravorty—Indian Central Wage Boards Analysis. Calcutta, 1966. p. 32.

[5] ibid. p. 131.

[6] Awards made by Major Tribunals during 1948, Vol. III. Government of West Bengal, 1952. pp. 169-70.

[7] The Calcutta Gazette, Extraordinary, dated 10.6.1958. p. 2074.

MINIMUM WAGES AND DEARNESS ALLOWANCES PER MONTH OF UNSKILLED WORKERS AND CLERKS AS FIXED BY THE FIRST AND SECOND COTTON TEXTILE TRIBUNALS AND CENTRAL WAGE BOARD ON COTTON INDUSTRY

(figures in Rupees)

	Unskilled Workers		
	Male	Female	Clerks
First Tribunal			
Wage	20.15	15.06	60–130 70–210
D.A.	30 (fixed)	22.50 (fixed)	35 (fixed)
Second Tribunal			
Wage	28.17	28.17	60–130 70–210
D.A.	32.50 (fixed)	24 38 (fixed)	35 (fixed)
Cotton Wage Board			
Wage	36.17 (from 1.1.1960) 38.17 (from 1.1.1962)	— —	50–125 75–250
D.A.	64.13 (variable) (as on Dec. 1965)	—	as prescribed for different pay scales

Engineering industry

In the engineering industry there has been four Tribunal awards and a recommendation by the Engineering Wage Board for granting interim relief. The first Tribunal (1947) fixed minimum wages for unskilled and semi-skilled workers, recommended grades of pay for peons and durwans as also for three categories of clerks and minimum pay for drivers of cars and lorries.[1] The Second Tribunal (1950) only raised the rates of dearness allowances fixed by the first.[2] The third Tribunal (1958) whose award was expressly limited to engineering establishments employing 250 persons or more introduced grades of pay for highly skilled. skilled, semi-skilled and unskilled workers, revised those of the clerical and subordinate staff and further increased the rates of dearness allowance which. for the first time, was linked to the Cost of Living Index. The wage structure of skilled. semi-skilled and unskilled workers as also apprentices in small engineering units of Howrah, as available from a survey undertaken in 1959 by the Jadavpur University under the auspices of the Reserve Bank of India, which covered intensively the operations of 200 units employing 20 or more persons, besides a 'quick survey' made in 1960[3] of the operations of 396 out of 943 smaller units, employing less than 20 persons, shows that the average minimum and maximum daily wage rates for skilled workers were Rs. 3.05 and Rs 5.08

[1] Awards made by Major Tribunals during 1948, Vol. III. Labour Department. Government of West Bengal. Calcutta, 1952. pp. 76-103

[2] The Calcutta Gazette, Extraordinary, January 30, 1967.

[3] Survey of Small Engineering Units in Howrah: Reserve Bank of India, Calcutta, 1964. Para (4) of the Foreword.

respectively while for semi-skilled and unskilled workers and apprentices, they were Rs. 2.14 and Rs. 3.15, Rs. 1.55 and Rs. 2.39, and Re. 0.94 and Re. 1.41 respectively.[1] The Seventh Industrial Tribunal whose award (1967) covered engineering establishments employing 10 to 249 workers revised the grades of pay of all categories of workers, introduced two scales for clerical staff instead of three and enhanced the rates of D.A. which were linked to the Cost of Living Index. The Wage and dearness allowance structure of various categories of employees under the different awards is shown in the following two tables.

TABLE—A

WAGES (IN RS.) PER MONTH OF VARIOUS CATEGORIES OF ENGINEERING WORKERS UNDER DIFFERENT AWARDS

	First Award	Third Award	Fourth Award
Unskilled	30	35–37.50	45–50
Semi-skilled	35	40–65	55–80
Skilled	—	75–115	90–130
Highly skilled	—	110–155	110–170
Peons	25-40	30–50	45–65
Durwans	30-45	35–55	60–82.50
Drivers	55	60–90	70–92.50
Lorry drivers	60	65–95	75–97 50
Non-matriculate clerks	55–80	60–90	—
Undergraduate clerks	60–90	65–135	70–140
Graduate clerks	70–130	75–160	80–170
Supervisory staff	65–105	70–160	75–165

TABLE—B

DEARNESS ALLOWANCES (IN RS.) PER MONTH OF VARIOUS CATEGORIES OF ENGINEERING WORKERS UNDER DIFFERENT AWARDS

Pay Range	First Award (fixed)	Second Award (fixed)	Third Award (Variable) Based on Cost of Living Index 364 in 1958 (1939=100)	Fourth Award (Variable) Based on Consumer Price Index 507 in 1965 (1939=100)
Up to Rs. 50	25	31	36	51
From Rs. 51 to Rs. 100	35	42	47	55
From Rs. 101 to Rs. 150	40	48	53	60
From Rs. 151 to Rs. 200	45	54	59	65
Rs. 201 and above	50	60	65	70

[1] ibid. p. 37.

The Central Wage Board on Engineering Industries, set up by the Government of India in 1964, granted with effect from 1.4.66 interim relief to all workers, in establishments employing 50 or more persons, and drawing less than Rs. 500 per month according to the following scales: Rs. 12.50 up to Rs. 105 per month; Rs. 7.50 above Rs. 105 but not more than Rs. 150 per month; Rs. 6 above Rs. 150 but not more than Rs. 250 per month and Rs. 5 above Rs. 250 but not more than Rs. 500 per month.

Standard of living

The spiralling of prices since the middle of 1956 resulted in the progressive rise in the general cost of living for all expenditure groups as is evident from the following table which also indicates that the cost of living index closely followed the index for food articles which had the greatest weightage in domestic consumption.

COST OF LIVING INDEX
(Base: November, 1950=100: Centre—Howrah)

Items of consumption	Year	Expenditure Groups				
		Re. 1-Rs. 100	Rs. 101-Rs. 200	Rs. 201-Rs. 350	Rs. 351-Rs. 700	Rs. 701 and above
Food	1956	99.1	96.7	95.7	95.0	95.5
	1961	112.2	111.5	110.0	109.9	110.0
	1965	141.4	141.6	141.0	142.2	143.1
All combined	1956	100.7	99.8	100.5	100.3	100.9
	1961	114.0	114.2	114.0	113.4	115.5
	1965	137.4	137.7	136.8	135.5	138.0

Rural family budgets

The trend of family budgets in rural areas of the district would be evident from table 'A' below which indicates the consumption pattern of the people of Mohisgot (Sankrail P.S.) during 1957-62, as gleaned from the unpublished report of the re-survey conducted by the Agro-Economic Research Centre, Santiniketan.[1] The following table 'B', prepared by the State Statistical Bureau, West Bengal, shows the trend of family budgets in Howrah town during the period 1950-51 to 1960-61.

TABLE—A

CONSUMPTION PATTERN BY INCOME GROUPS OF THE PEOPLE OF MAHISGOT DURING 1957-62

	Year	Income groups						
		Up to Rs. 100	Rs 101-Rs. 150	Rs. 151-Rs. 200	Rs. 201-Rs. 300	Rs. 301-Rs. 500	Rs. 501 & above	Average
Persons	1957	39 (4.70)	227 (27.38)	240 (28.95)	190 (22.92)	125 (15.08)	8 (0.96)	829 (100.00)
(No./%)	1962	152 (15.75)	249 (25.80)	261 (27.04)	209 (21.66)	92 (9.53)	2 (0.21)	965 (100.00)

[1]Dr. G. C. Mondal and N. Bandyopadhyaya—op. cit tables 5.7 & 5.8.

(contd.)

CONSUMPTION PATTERN BY INCOME GROUPS OF THE PEOPLE OF MAHISGOT DURING 1957-62.—*contd.*

	Year	Income groups						
		Up to Rs. 100	Rs. 101-Rs. 150	Rs. 151-Rs. 200	Rs. 201-Rs. 300	Rs. 301-Rs. 500	Rs. 501 & above	Average
Per capita average income (in Rs.)	1957	66.92	120.26	168.71	210.80	333.19	546.50	188.72
	1962	88.50	132.35	189.37	283.04	388.47	683.35	199.06
Total expenditure (in Rs.)	1957	85.24	141.51	170.82	194.06	230.73	269.70	174.01
	1962	133.03	173.27	213.28	253.83	283.14	298.58	205.94
Items of consumption								
Cereals & pulses	1957	63.48	62.23	59.49	56.43	51.42	46.68	57.63
	1962	60.74	57.78	55.67	55.04	51.52	48.91	55.37
Fuel	1957	1.69	2.10	2.66	2.81	2.54	3.04	2.53
	1962	4.96	3.85	3.22	3.88	3.73	3.92	3.78
Food (total)	1957	90.61	89.68	89.94	87.81	86.00	88.15	88.53
	1962	92.51	91.62	87.56	87.32	88.13	78.82	88.94
Education	1957	—	0.20	0.29	0.35	0.39	0.49	0.30
	1962	0.96	0.60	2.89	1.68	2.15	1.88	1.77
Medical	1957	3.20	4.83	4.10	4.07	5.14	5.65	4.47
	1962	0.75	0.43	0.67	0.59	0.32	3.25	0.56
Ceremony	1957	—	0.21	0.47	1.40	1.29	0.85	0.81
	1962	0.93	2.24	1.73	3.90	1.87	5.93	2.38
Clothing & footwear	1957	6.18	5.07	5.20	6.37	7.18	4.86	5.88
	1962	4.85	5.10	7.15	6.52	7.52	10.12	6.36
	1957	100	100	100	100	100	100	100
	1962	100	100	100	100	100	100	100
% of expenditure to per capita income	1957	127.38	119.30	101.84	93.96	70.45	51.68	93.55
	1962	150.32	130.92	112.63	89.68	72.89	43.69	103.46

TABLE—B

PERCENTAGE EXPENDITURE ON DIFFERENT GROUPS OF ITEMS OF CONSUMPTION BY DIFFERENT EXPENDITURE LEVELS

Centre: Howrah

Groups of items of consumption	Year	Monthly expenditure levels (in Rupees)				
		1-100	101-200	201-350	351-700	701 and above
Food	1950-51	62.86	61.23	53.95	47.97	38.96
	1955-56	63.13	62.69	51.39	47.23	39.12
	1960-61	61.54	60.75	52.37	53.25	42.49
Clothing	1950-51	4.88	5.43	5.38	4.89	4.77
	1955-56	5.59	5.83	7.70	7.91	7.80
	1960-61	7.31	8.77	7.66	8.15	12.29

(*contd.*)

PERCENTAGE EXPENDITURE ON DIFFERENT GROUPS OF ITEMS OF CONSUMPTION BY DIFFERENT EXPENDITURE LEVELS.—*contd.*

Centre: Howrah

Groups of items of consumption	Year	Monthly expenditure levels (in Rupees)				
		1-100	101-200	201-350	351-700	701 and above
Fuel & Light	1950-51	7.27	5.36	4.89	4.81	3.73
	1955-56	6.66	5.40	4.33	4.62	3.70
	1960-61	6.70	5.22	5.18	4.14	3.27
Housing	1950-51	6.66	5.75	4.63	8.65	5.70
	1955-56	9.28	6.94	10.62	7.75	7.30
	1960-61	10.33	9.89	12.43	6.65	0.86
Miscellaneous	1950-51	18.33	22.23	31.15	33.68	46.84
	1955-56	15.34	19.14	25.96	32.49	42.08
	1960-61	14.12	15.27	22.36	27.81	41.09
	1950-51	100.00	100.00	100.00	100.00	100.00
Total	1955-56	100.00	100.00	100.00	100.00	100.00
	1960-61	100.00	100.00	100.00	100.00	100.00

Levels of living

It will appear from Table-C at p. 358 that there was rise in average consumer expenditure among all occupational groups except those of 'cultivators of land wholly or mainly unowned' and 'service and miscellaneous' in which cases the decrease was to the extent of 11% and 13% respectively, while in 'production other than cultivation' the expenditure remained unchanged. The deterioration in the condition of the 'service and miscellaneous' group resulted from retrenchment of workers from jute mills while that of 'cultivators of land wholly or mainly unowned' was due to their failure to bargain at the time of the revisional settlement and consequent acceptance of inferior tenancy terms. The wide divergence between increased income and expenditure of the 'trade and commerce' group was perhaps due to highly enhanced earnings from such "unreported sources as bootlegging and smuggling."[1]

The average per capita expenditure on cereals in the village of Mahisgot as a whole increased from Rs. 94.63 to Rs. 106.44 but as percentage of total consumer expenditure it recorded a decrease from 54.38 to 51.69. Deflated by the price relative the increase was only 1.37 per cent. That is to say, the village was spending considerably more to keep the levels of cereals consumption at the same level.[2] . . .

[1] op. cit. para. 5.9.
[2] Ibid. para. 5.10.

TABLE—C

PER CAPITA ANNUAL CONSUMPTION EXPENDITURE (IN RS.) OF DIFFERENT GROUPS OF PEOPLE OF MAHISGOT DURING 1957-62

Articles of Consumption

Occupational groups	Year	Cereals	Food (total)	Fuel & Light	Education	Medical	Ceremony	Clothing & foot-wear	Miscella-neous	Total/ % of in-crease or decrease over 1957
Cultivation of land wholly owned	1957	109.03	152.47	3.63	1.44	5.20	1.27	12.61	17.64	194.26 (100.00)
	1962	111.66	177.86	9.04	3.76	1.46	5.38	14.85	11.89	224.24 (115.43)
Cultivation of land mainly owned	1957	89.76	123.82	3.73	0.97	6.73	4.97	9.95	22.00	172.17 (100.00)
	1962	139.03	199.43	4.70	2.78	1.58	4.19	13.87	9.46	235.91 (137.02)
Cultivation of land wholly or mainly unowned	1957	93.39	130.19	5.76	0.48	2.78	0.98	10.14	12.59	162.92 (100.00)
	1962	82.70	108.51	3.33	9.89	2.03	4.13	12.59	5.04	145.52 (82.39)
Agricultural labourer	1957	84.05	117.13	2.84	0.29	1.46	0.37	8.84	19.62	150.55 (100.00)
	1962	90.72	141 55	8.40	0.34	0.63	6.38	10.14	10.25	177.69 (118.03)
Production other than cultivation	1957	104.40	144.60	4.80	—	22.67	—	8.33	14.31	194.71 (100.00)
	1962	95.04	143.33	8.31	2.83	1.17	4.27	11.92	22.46	194.25 (99.76)
Trade & Commerce	1957	85.03	116.34	4.84	1.00	4 37	1.72	9.45	16.94	154.66 (100.00)
	1962	104.06	171.32	11.91	7.89	0.40	3.11	15.05	12.59	222.26 (143.71)
Service & Miscellaneous	1957	102.90	150 09	5.66	0.30	8.38	—	12.35	24.66	201.44 (100.00)
	1962	91.88	129.00	4.55	15.09	0.61	1.38	14.69	10.19	175.51 (87.13)
Average	1957	94.63	131.82	4.41	0.53	7.77	1.41	10.24	17.83	174.01 (100.00)
	1962	106.44	163.22	7.78	3.64	1.16	4.90	13.10	12.14	205.94 (118.35)
Deflated by price relatives		101.37	149.79	6.22	3.64	1.16	4.90	9.63	10.20	185.54 (106.63)

Intragroup comparison of cereals expenditure reveals that for the group 'cultivators of land mainly owned' the per capita consumption of cereals increased from Rs. 89.76 to Rs. 139.03; expressed in terms of the percentage of total consumer expenditure, the increase was from 52.13 to 58.93.[1] The most striking feature in respect of cereals was the absolute drop in average cereals consumption of all non-agricultural consumption groups due to relative scarcity of rice in areas around Calcutta especially during the period between June-September.[2] The overall increase in expenditure on food from Rs. 131.82 to Rs. 163.22 and the larger percentage allocation on food items (79.26 in 1962 against 75.75 in 1957) in the total consumer expenditure would indicate comparative prosperity of the village. The village's average expenditure on education was strikingly low, constituting only 0.30% of the total expenditure in 1957 and 1.77% in 1962. The sharp fall in medical expenditure from Rs. 7.77 to Rs. 1.16 per head during 1957-62 was due to the anti-epidemic and other prophylactic measures introduced by some relief organizations of Calcutta and availability of medical and hospital facilities at Calcutta, not far off.[3] Expenditure on clothings increased from Rs. 10.24 to Rs. 13.10 owing to higher prices but when deflated by price relative the actual consumption indicated slight fall.[4]

While the Mahisgot survey revealed a downward shift in the per capita income levels of the villages, "the percentages of expenditure and for food items increased in all groups. As expected, lower income groups were spending more on food. There was an increase in the overall consumption expenditure."[5] The following table[6] showing the relative change in consumer price index and index of real income according to occupational groups during the period 1957-62 will indicate the extent of rise or fall in the standard of living of the people of Mahisgot, a typical village which may be taken to represent many of its kind in the district.

CONSUMER PRICE INDEX AND INDEX OF REAL INCOME ACCORDING TO OCCUPATIONAL GROUPS OF MAHISGOT VILLAGE

Occupational Group	Consumer Price Index		Index of Income (per capita)		
	1957	1962	1957	1962 (at 1962 prices)	Deflated by Consumer Price Index
Cultivation of land wholly owned	100.00	115.69	100.00	95.68	82.70

(*contd.*)

[1] ibid. para. 5.13.
[2] ibid. para. 5.13.
[3] ibid. para. 5.15.
[4] ibid. para. 5.16.
[5] ibid. para. 5.20.
[6] ibid. table 5.3.

CONSUMER PRICE INDEX AND INDEX OF REAL INCOME ACCORDING TO OCCUPATIONAL GROUPS OF MAHISGOT VILLAGE.—*(contd.)*

Occupational Group	Consumer Price Index		Index of Income (per capita)		
	1957	1962	1957	1962 (at 1962 prices)	Deflated by Consumer Price Index
Cultivation of land mainly owned	100.00	114.24	100.00	115.49	101.09
Cultivation of land mainly and wholly unowned	100.00	112.14	100.00	80.69	71.95
Agriculture labour	100.00	111.48	100.00	96.51	86.57
Production other than cultivation	100.00	114.14	100.00	123.73	108.40
Trade & Commerce	100.00	113.99	100.00	104.42	91.60
Service, profession & miscellaneous	100.00	110.98	100.00	92.32	83.19
General (all classes)	100.00	113.63	100.00	105.48	92.83

EMPLOYMENT EXCHANGE

There is a Sub-Regional Employment Exchange in Howrah town with jurisdiction over the whole district. It started functioning in August 1947. The following table (valid for 1966) giving figures of registrations, placements, vacancies notified, live register at the close of the year and the average number of employers using the Exchange per month will convey an idea of the magnitude of the unemployment problem facing the district and the efforts of the Exchange to relieve it.

PERFORMANCE OF SUB-REGIONAL EMPLOYMENT EXCHANGE IN HOWRAH TOWN DURING 1966

Year	No. of registrations	No. of placements	Vacancies notified	Live Register at the end of December 1966	Monthly average No. of employers using the Exchange
1966	21,335	2,267	3,746	30,433	30.8

At present the Exchange is experiencing shortage of markers, die makers, weavers (power loom), spinners (jute and coir), Secondary school teachers, platers, reelers, winders (textile), template makers, motor launch serangs and stenographers while there is an excess of fitters, turners, moulders, carpenters and unskilled workers and general clerks (mostly fresh from schools).

To relieve congestion in crowded occupations, the Exchange keeps the registrants posted through group discussions and advises them to equip themselves for absorption in new callings. With this

end in view it arranges career talks in schools, provides vocational guidance, assists in the placement of candidates in training centres and apprentices' jobs and disseminates local information on occupations, educational courses and training facilities etc.

COMMUNITY DEVELOPMENT

As part of the Five-Year Plans, the community development programme aiming at resuscitation of the socio-economic life of rural people was first launched in the district in Ocotber 1955 with the inauguration of the Uluberia-I, Bagnan-I and Syampur-I Development Blocks. The programme now covers the entire district with 14 Blocks, the particulars of which are given below.

Name of Sub-division	Name of Block	Date of inauguration	Stage	Area in sq. km.	No. of villages	Total population
Uluberia	Uluberia-I	2.10.55	II	115.72	58	1,15,074
	Bagnan I	"	"	86.33	49	88,993
	Syampur-I	"	"	115.26	72	88,872
	Syampur-II	1. 4.58	"	101.42	71	83,025
	Bagnan-II	"	"	80.29	51	70,720
	Uluberia-II	"	"	88.06	56	1,27,839
	Uday Narayanpur	2.10.59	I	120.18	75	84,969
	Amta-I	1. 4.61	"	125.10	79	1,05,625
	Amta-II	2.10.61	"	137.01	69	1,01,901
Sadar	Domjur	1. 4.56	II	97.26	51	1,27,200
	Jagatballavpur	2.10.59	I	128.08	77	1,05,489
	Baly-Jagachha	1. 1.62	"	60.40	17	1,09,074
	Sankrail	2.10.62	"	64.23	34	1,24,265
	Panchla	"	"	71.04	32	93,024

The actual expenditure incurred by the various Blocks in 1965-66 under different welfare programmes is shown in the table in the appendix. Some of these schemes were financed, as usual, from the State exchequer while in others, people's participation through contribution of funds of voluntary labour was a necessary pre-condition.

GOVERNMENT EMPLOYEES' ORGANIZATIONS

A number of Government employees' organizations, recognized and unrecognized, operate in the district. The names of the recognized ones are given below.[1]

1. Government of India Press Workers' Union, Santragachhi.
2. All India Postal Employees' Union (Head Post Office and T.S.O. Branch).

[1] Source: District Magistrate, Howrah.

3. All India Postal Employees' Union (Postmen and Class IV) Howrah Divisional Branch.
4. All India Telegraph Traffic Employees' Union (Class III).
5. All India Telegraph Traffic Employees' Union (Class IV).
6. All India R.M.S. Union, West Bengal Division.
7. All India R.M.S. Union (Mailguard & Class IV), West Bengal Division.
8. All Bengal Nimnatama Sarkari Karmachari Samiti (Howrah Branch)
9. Paschim Banga Nimnatama Sarkari Karmachari Samiti (Uluberia Branch)

LEARNED PROFESSIONS

Teachers

The number of teachers in the district in 1963-64 was 11,121, including 2,123 females, distributed among the various educational institutions as follows: 492 (including 23 females) in Colleges (general, vocational and special); 9,747 (including 1,943 females) in Higher Secondary, High, Junior High, Senior Basic, Primary & Junior Basic and Nursery Schools; 282 (including 44 females) in vocational schools and 600 (including 113 females) in special institutions like *Tôls*. *Madrasahs* etc.[1] They have their respective associations to safeguard and promote their interests. The problems connected with collegiate education relate chiefly to the lack of a uniform pay-scale and a common code of service conditions. The elevation of the standard of higher education and reformation of the present system of examination are other desiderata.[2] Secondary education suffers largely from frequent change of schools and profession by teachers of science and technical streams in urban areas of the district due to economic reasons and housing difficulties. In the rural areas, irregular payment of salaries and environmental difficulties are responsible for dearth of qualified teachers.[3]

Doctors

In 1961 there were 2,351 doctors in the district of whom 2,317 were males and 34 females. Allopathic physicians and surgeons numbered 748 (including 13 females), Homoeopathic physicians 373 (including 5 females), Ayurvedic physicians 294 (including 5 females) and other unclassified physicians 936. Of the 748 allopaths, 526 (including 12 females) practised in urban areas and 222 (including a female) in the countryside. Similarly, out of 373 homoeopaths, 183 (including a female) were in urban and the remaining 190 in rural areas. Of the 294 ayurvedic physicians, the urban-rural distribution was 118 (including a female) and 176. These dispersal figures are interesting inasmuch as they indicate the preponderance of allopaths in urban areas and of homoeopaths and ayurvedic physicians in the interior.

[1] Source: Directorate of Public Instruction, West Bengal.
[2] Source: West Bengal College and University Teachers' Association.
[3] Source: West Bengal Headmasters' Association.

Lawyers

In 1961 the number of persons engaged in the legal profession was 876 (including 2 females), of whom 499 (including a female) were legal practitioners and advisers, 321 (including a female) were jurists and legal technicians (including petition writers) and the remaining 76 were unclassified. The problems besetting the Howrah Bar Association relate chiefly to want of accommodation and lack of funds for improving the library.

Engineers

Numerous engineers are employed in the district noted for its diversified industries. In 1961 there were 1,575 (including 5 females) engineers, architects and surveyors in Howrah of whom 615 were civil engineers (including overseers) and 237 mechanical engineers (including a female). A number of associations like the Institution of Engineers (India) looks after their professional interests.

Barbers

In the Census of 1961, 3,212 persons (including 23 females) were enumerated in the district as barbers, hair-dressers, beauticians etc. In the first quarter of 1967, their charges for a hair-cut in a 'saloon' were usually 0.60 paise in urban areas and 0.50 paise in the countryside, while it was 0.20 paise for a shave and 0.75 paise for a hair-cut and a shave throughout the district. The monthly wages of barbers employed in 'saloons' in the Sadar subdivision varied between Rs. 75 and Rs. 100 while the corresponding rate in Uluberia subdivision was usually Rs. 30 with food and clothing. They have an association in Howrah town to look after their trade interests; it functions as a branch of the registered central organization located in Calcutta.[1]

Tailors

The Census of 1961 put the total number of tailors, cutters, furriers and related workers in the district at 14,543, including 413 females. In the Sadar subdivision most of the tailors' shops are either privately owned or run on partnership basis while in Uluberia they are usually self-managed. Tailoring charges vary according to the quality of the materials as also of the work. In the first quarter of 1967 they were Rs. 1.75 for making a cotton half-shirt, Rs. 2 to Rs. 2.50 for a full-shirt or a *pānjābi* and Rs. 15 to Rs. 16 for a cotton suit. There is no association of tailors in the district.[2]

Washermen

The Census of 1961 enumerated 3,293 persons (including 357 females) in the district as launderers, cleaners, pressers, washermen and dhobies. They are mostly resident in the urban areas. Their usual charges vary from 0.20 to 0.25 paise per piece and from Rs. 18 to Rs. 22 per 100 articles. The economic condition of washermen is far from satisfactory. There is an unregistered association of washermen in Howrah town.[3]

Domestic servants

The number of persons engaged in the district as housekeepers, cooks, domestic servants, maids etc. was 12,339 in 1961 of whom 5,095 were females. They have no association to protect their rights and interests.

[1-3] Source: District Magistrate, Howrah.

APPENDIX

ACTUAL EXPENDITURE (IN RS.) INCURRED DURING 1965 66 UNDER DIFFERENT WELFARE PROGRAMMES IN THE DEVELOPMENT BLOCKS OF HOWRAH DISTRICT

Name of Block	Agriculture	Irrigation	Animal Husbandry	Social Education	Communication	Tribal welfare	Co-operation	Cottage Industry	Panchayat	Community recreation, local sport activities etc.
Uluberia I	50.349	47,458	5,200	6,473	1,800	8,239	—	7,496	26,779	—
Bagnan I	11,006	4,550	400	1,440	1,139	4,312	84,370	2,000	10,074	350
Syampur I	8,664	52,893	1,000	—	—	2,115	—	8,307	25,630	342
Syampur II	63,243	6,155	400	—	—	3,868	—	4,000	21,057	—
Bagnan II	3,690	—	415	—	—	550	4,596	—	18,220	1,200
Uluberia II	26,434	—	400	3,219	—	6,202	1,01,600	11,320	25,846	—
Uday Narayanpur	23,128	52,750	3,785	4,760	27,833	1,400	—	12,520	11,000	—
Amta I	63,292	—	3,000	10,700	10,000	5,504	—	6,421	16,941	2,000
Amta II	16,311	85,000	9,840	2,000	25,000	5,000	—	11,500	20,253	1,200
Domjur	46,071	9,116	10,490	9,349	—	9,043	4,419	10,585	26,673	3,636
Jagatballavpur	52,074	40,000	250	4,116	30,463	20	—	—	30,795	—
Bally-Jagachha	12,590	6,000	2,734	7,200	2,500	505	—	1,200	13,000	—
Sankrail	17,232	—	734	5,526	—	5,627	3,856	2,400	43,317	—
Panchla	19,001	—	—	—	—	15,063	—	2,000	34,210	—

CHAPTER IX

GENERAL ADMINISTRATION

THE STATE GOVERNMENT SET-UP

District Magistrate

A Collector (District Magistrate) has power to act in all matters not reserved by any law or order for the orders of higher authority. Chief executive agent of the State and the Union Governments (in so far as the latter's functions are to be performed by the former), the District Magistrate exercises wide powers affecting the entire district, including the local self-governing agencies within it. Broadly speaking, he is to preserve peace, collect revenues and attend to the positive welfare of the resident population.

As the custodian of law and order, he is assisted by the police organization in the district under the immediate control of the Superintendent of Police. For this purpose, he may also call up units of the National Volunteer Force whenever necessary. For the performance of these duties, he is placed under the Divisional Commissioner.

As the Collector of the district responsible for collection of revenues, he functions under the Board of Revenue through the Divisional Commissioner and is in ultimate charge of revenue matters some of which is administered from day to day by an Additional District Magistrate, also designated as Collector (Estates Acquisition). These duties mainly consist of maintenance of records of rights, management of all lands vested in Government, payment of compensation to ex-intermediaries, acquisition of lands for public purposes, management of private estates held in trust by the State persons, collection of rents, cesses, stamp duties, excise duties, entertainment taxes, licence fees etc. He also hears revenue appeals and exercises general supervision over the District Treasury.

As the chief executive in the district, he is the focal officer for reporting calamities like floods and famines and providing relief to the victims through gratuitous relief or test relief operations. He has special duties to perform in respect of the welfare of the backward classes and the rehabilitation of displaced persons and exercises general control over the supply and distribution of controlled articles. He is also responsible for conducting elections and census operations within the district. He is also the Controller of Civil Defence for the district.

Prior to the introduction of the Montagu-Chelmsford Reforms of 1919, the District Officer exercised close financial and administrative control over the local bodies. He is, however, still responsible

for ensuring that the proceedings of the municipalities are in conformity with the prescribed rules and he may suspend their order and resolutions in some cases. In cases of serious irregularity, he may advise the Government for their supersession. He is empowered to call for and inspect any document of the Zilla Parishad, cause the Zilla Parishad to furnish information as he thinks necessary and inspect the office of the Zilla Parishad or any institutions under its control. He decides which, between the Zilla and Anchalik Parishads, will execute and maintain a State-sponsored work and excercises some control over the annual allocations of public funds to the Zilla Parishad and its Standing Committees. The District Magistrate is thus entitled to exercise himself or through the various district-level officers, who are members of the Standing Committees of the Parishad, a fair amount of control on the affairs of this organization.

After independence, the successive Five-Year Plans with their socio-economic developmental programmes have added to traditional functions of the Magistrate-Collector. The district-level officers of various departments in immediate charge of community development programmes, namely agriculture, irrigation, animal husbandry, co-operation, small-scale and cottage industries, panchayats, education, social education, communication, health etc., normally work under their respective departmental superiors, but the District Officer, as the principal co-ordinating agency in the district, gives them general guidance, assesses progress of their work and ensures removal of obstacles in the implementation of their tasks. He is assisted in this behalf by a Special Officer, Planning and Development. He is advised besides by the District Development Council consisting of the Chairman of the Zilla Parishad, the Chairmen of the municipalities, the Superintendent of Police, the Subdivisional Officers, the President of District School Board, one representative of Anchal Panchayats from each police station, the local members of West Bengal Legislative Assembly and Legislative Council, the Union Parliament, district-level officers connected with community development, and private persons appointed by the State Government. Similarly, at the block level, the Block Development Committee composed of the block-level officers and non-officials act as co-ordinating agencies for the implementation of development programmes With the emergence of Panchayat institutions, the village Panchayats are also represented on these Block Committees.

As the foremost representative of a welfare State in the district, the District Magistrate has to associate himself with numerous official and non-official organizations functioning in every sphere of public life. In Howrah, he is Chairman of the District Committee of National Foundation for Teachers' Welfare, Advisory Committee of Howrah General Hospital, Lilua Homes, District Small Savings Advisory

Committee, District Planning and Executive Committee on Industrial Estates, District Food and Relief Co-ordination Committee, Regional Transport Authority, District Tender Committee, Howrah Jail, District Development Council, Development Co-ordination Committee, Foundry Planning Sub-committee (Development), Site Selection Committee for Health Centres, Committee for Allotment of Quarters under Rental Housing Schemes for State Government Employees, District Health Committee, District Welfare Committee, District Welfare Committee for the Scheduled Castes and Tribes, Village Volunteer Force District Committee, District Evaluation Committee, District Small Irrigation and Tank Improvement Committee, District Agricultural Sub-committee etc. Besides, he is the President of the District Advisory Council on Education, District Youth Welfare Council, Managing Committee of the Howrah Zilla School, Managing Committee of the Duke Public Library and Howrah Library Association, Howrah District Red Cross Society, Howrah Rifle Club, District Advisory Committee of West Bengal National Volunteer Force, District Soldiers, Sailors and Airmen's Board, St. John Ambulance, Howrah Homes, District Sporting Association etc. He is, moreover, a member of the District Excise Licensing Board.

To keep the Government posted on all matters relating to his diverse functions, he has to send to the Divisional Commissioner and the various Departments and Directorates a large number of periodical reports and returns.

Additional District Magistrate

There is an Additional District Magistrate in Howrah having concurrent jurisdiction with the District Magistrate. He usually remains in charge of the district when the latter is away. His normal duties include looking after criminal work including criminal motions, Judicial Munshikhana (proposals for appointment of Honorary Magistrates are to go through the District Magistrate), Revenue Munshikhana including civil suits, Certificate Department including certificate appeals, Nezarath including transfer of fourth grade government servants, Land Acquisition Department except land acquisition under the Land Development and Planning Act and requisition of premises, Record Room and Copying Department, Loans Department except policy and allotment. He has also certain duties in respect of the Zilla Parishad and its ancillary bodies as also the municipalities. Besides, he is in charge of Estates Acquisition, Compensation, Khas Mahal (important matters appertaining to town Khas Mahal are usually shown to D.M.), Touzi and Cess and residuary work of land registration and attached estates. He also supervises the work of the District School Board, the execution of Primary Education Act and realization of education taxes. He is also concerned with jail and excise administration and routine and establishment matters relating to food, supplies and normal relief. In addition to these duties, he also acts as the Additional Controller of Civil Defence.

Deputy & Sub-Deputy Magistrates

The following table gives the number of Deputy Magistrates & Deputy Collectors and Sub-Deputy Magistrates & Sub-Deputy Collectors posted in the two subdivisions of the district in May, 1967. (The figures for the Sadar subdivision include those meant for the district headquarters).

Subdivision	No. of Deputy Magistrates & Deputy Collectors	No. of Sub-Deputy Magistrates & Sub-Deputy Collectors
Sadar	13	16
Uluberia	1	13

At Sadar, Deputy Magistrates hold the posts of Subdivisional Officer (Sadar), Senior Deputy Collector, Special Officer for Planning and Development, Additional Deputy Controller of Civil Defence, Regional Transport Officer, District Panchayat Officer, Special Land Acquisition Officer, Additional Special Land Acquisition Officer, and Special Land Acquisition Officer attached to the Howrah Improvement Trust. Besides, 3 Deputy Magistrates try criminal cases and one looks after departmental works. The Subdivisional Officer of Uluberia and one Deputy Magistrate there try cases and attend to various departmental duties.

Of the Sub-Deputy Magistrates employed at Sadar, 2 sit as trying courts, 2 perform departmental work besides trying cases, one is attached to the Howrah Improvement Trust as Additional Land Acquisition Officer, 7 attend to various departmental duties exclusively and 4 work as Block Development Officers. Of the Sub-Deputy Magistrates posted at Uluberia, 3 sit as trying courts in addition to their departmental assignments, one is meant for departmental work exclusively while 9 are employed as Block Development Officers.

Other Officers at district headquarters

Other gazetted officers stationed at the district headquarters include four Sub-Magistrates (two of whom look after departmental work while the rest discharge judicial duties), a Tribal Welfare Officer, a Tank Improvement Officer, a Land Requisition Officer, a District Compensation Officer, a Subdivisional Refugee Relief & Rehabilitation Officer and a Superintendent of Excise.

Block administration

The Block Development Officer is the executive head of block administration and is, as such, the drawing and disbursing officer in respect of most of the schemes sanctioned under the community development project. With progressive democratization, the block administration is nowadays closely associated with the Anchalik Parishad and the B.D.O. is the *ex-officio* Chief Executive Officer of the Anchalik Parishad and is also the Inspector of Panchayats within his jurisdiction. He is responsible for co-ordinating the activities of the Extension Officers who are block-level specialists looking after the implementation of schemes of their respective parent departments. Usually, each block has 8 Extension Officers, one each for agricul-

ture, animal husbandry, rural engineering, social education, programme for women and children, co-operation, rural industries and panchayats. But for paucity of personnel the full complement of these specialists is not employed in all the blocks of the district.

Each block has, besides, 2 Gram Sevikas while the number of Gram Sevaks varies from one block to another. Similarly, the complements of office and Class IV staff and the total establishment expenditures differ from block to block. The following table gives the strength of Gram Sevaks, office staff and Class IV staff as also total establishment expenditure in each block during 1965-66.

Subdivision	Block	Gram Sevak	Office staff	Class IV staff	Total establishment expenditure (Rs.)
Sadar	Baly-Jagachha	9	7	7	80,450
	Domjur	8	5	8	1,31,418
	Jagatballavpur	6	5	7	55,410
	Panchla	4	6	5	82,294
	Sankrail	7	5	5	78,692
Uluberia	Amta I	7	7	10	94,897
	Amta II	7	7	6	42,629
	Bagnan I	4	7	8	98,926
	Bagnan II	4	7	7	69,426
	Syampur I	10	7	9	71,411
	Syampur II	7	7	11	51,721
	Uday Narayanpur	7	5	8	Not available
	Uluberia I	6	7	11	1,04,627
	Uluberia II	6	7	7	87,961

Agricultural administration

The District Agricultural Officer is in overall charge of agricultural administration in the district. He is assisted by an Additional District Agricultural Officer who imparts technical advice to B.D.O.s regarding Block seed farms and other developmental works. The Subdivisional Agricultural Officers placed under him look after the seed stores with the help of two Agricultural Overseers and the implementation of various agricultural schemes within their jurisdictions while the Manure Development Officer supervises the augmentation of local manurial resources. Two Sub-Assistant Engineers, assisted by two Surveyors, attend to all small irrigation schemes. Besides the usual complement of office staff, the D.A.O. has an Agricultural Demonstrator, six Union Agricultural Assistants, a Town-Compost Demonstrator, two Food Production Assistants, a Field-

man for plant protection schemes and an Agricultural Demonstrator for sugar-cane schemes. There are 6 Block seed farms in the district, each under an Assistant Farm Manager, located in Amta I, Bagnan I, Jagatballavpur, Syampur II, Uday Narayanpur and Uluberia I blocks. The total establishment expenditure of the agricultural administration of the district was Rs. 1,35,015 for the year 1965-66.

Agricultural Engineering administration

An Assistant Engineer is in charge of all matters connected with agricultural irrigation in the district. He is assisted by 3 Sub-Assistant Engineers and 2 Surveyors besides the usual complement of technical and office staff. The total establishment expenditure of his organization was Rs. 58,430 for 1965-66.

Since the early part of 1966, another officer designated as Assistant Engineer, Agri-mechanical and responsible for the installation and maintenance of irrigation pumps and the upkeep of similar equipments in the various Thana farms has been holding charge of both the Howrah and Hooghly districts with his headquarters at Chinsura.

Agricultural Marketing administration

The District Agricultural Marketing Officer holds joint charge of the districts of Howrah and Hooghly (with headquarters at Howrah) and studies market trends in these districts. In Howrah, he is assisted by two Subdivisional Agricultural Marketing Officers, one in each of the two subdivisions, and two Market Reporters stationed at Ramkrishnapur and Amta for spot collection of market intelligence. An Assistant Grading Assessor working partly under him has his jurisdiction over these two districts as also Burdwan. The total establishment expenditure for this set-up relating to Howrah alone was Rs. 86,872 06 during 1965-66.

Veterinary administration

As the executive head of veterinary administration in the district, the District Veterinary Officer keeps himself posted with the condition of local livestock and to undertake remedial measures against various kinds of cattle diseases as and when necessary. The Veterinary Inspector under him is the Officer-in-Charge of the State Veterinary Hospital at Howrah. He is also assisted by a Veterinary Field Assistant for artificial insemination and 12 Veterinary Field Assistants, one each for an even number of Aid Centres. Besides, in each of the 14 blocks in the district, there is a Veterinary Assistant Surgeon helped by two Veterinary Field Assistants.

Livestock administration

A District Livestock Officer holds joint charge of the districts of Howrah and Hooghly. In Howrah, he has under him two Assistant Livestock Officers for the two subdivisions of the district. Establishment expenditure incurred by this set-up during 1965-66 was Rs. 5,905.

Industrial administration

The District Industrial Officer, having his headquarters at Dasnagar (Jagachha P.S.), looks after the implementation of developmental schemes relating to cottage and small scale industries. He has two Investigators to assist him in dealing with loan cases under the Bengal State Aid to Industries Act, import licences and applications from

firms for registration with the Director-General of Supplies and Disposals. Besides, there is an Inspector to investigate loan cases for rehabilitation of displaced goldsmiths and to scrutinize petitions for issue of certificates etc. under the Gold Control Order. An Extension Officer (Industries) attends to work relating to the 14 blocks, training-cum-production centres, industrial co-operative societies etc. and two Assistant Inspectors supervise the registration of firms as small scale industrial units with the Directorate of Industries, West Bengal. Taking into account the usual complement of office staff, the establishment expenditure of this set-up during 1965-66 was Rs. 1,55,939.

Government Central Lock Factory, Bargachhia

The Government Central Lock Factory at Bargachhia (Jagatballavpur P.S.) is under the immediate control of a Superintendent with the District Industrial Officer in superior charge. The former looks after the quality of the products and suggests their sale prices in consultation with the District Industrial Officer. A Foreman, directly responsible to the Superintendent, maintains production and supervises the factory workers. The non-technical hands consist of the usual clerical and inferior staff. The total establishment expenditure incurred during 1965-66 was Rs. 1,84,494.

Central Workshop, Andul Road

The District Industrial Officer exercises general supervision over the Central Workshop situated on Andul Road near the Botanical Garden, a Supervisor being in immediate charge of the workshop and office. The latter is assisted by a Foreman, a grinder, a fitter, a foundry assistant, a blacksmith, an electroplater, a welding assistant and a draftsman in imparting training to the students in various vocational callings. The total establishment expenditure of the workshop for 1965-66 was Rs. 38,610.

Weights & Measures set-up

The Assistant Controller of Weights and Measures, Howrah is responsible for implementing within his jurisdiction the provisions of the West Bengal Standards of Weights & Measures (Enforcement) Act, 1958 and Rules, 1959. He has under him 8 Inspectors of Weights and Measures, of whom 6 are for the Howrah Corporation area, one for the Sadar and another for the Uluberia subdivision. They check and stamp weights and measures in common use, seize such of them as are unauthorized and perform other duties enjoined by the said Act and Rules. The expenditure for this establishment for 1965-66 was Rs. 63,260.

Co-operative administration

The Assistant Registrar of Co-operative Societies, Howrah is the administrative head of the Howrah range of the Co-operation Directorate. There are 2 more Assistant Registrars attached to the Howrah Wholesale Consumers' Co-operative Society Ltd. The District Auditor is in charge of the audit of co-operative societies within the range and a Co-operative Development Officer looks after the administration of development works. There are 8 Inspectors for supervising the work of co-operative societies, 13 Auditors for auditing the accounts of the same, an Industrial Organizer, assisted by a Field

Assistant, for organizing industrial co-operatives and a Marketing Inspector for inspecting the marketing societies.

There is besides the usual complement of office staff. The establishment expenditure incurred by this set-up during 1965-66 was Rs. 1,75,212.

School administration

The District Inspector of Schools looks after the Primary and Secondary schools in the district. Three Assistant Inspectors of Schools under him review the work of Junior High Schools while 8 Deputy Assistant Inspectors of Schools and 11 Sub-Inspectors of Schools inspect Junior High, Junior Basic and Primary Schools within their respective circles. A Senior Technical Assistant attends to statistical work relating to these various charges. Taking into account the usual office staff, the establishment expenditure incurred during 1965-66 was Rs. 1,03,403.

Social Education administration

The implementation of social education schemes for adults in the district is the responsibility of the District Social Education Officer who is assisted by a Technical Assistant for supervision of the night schools sponsored as pilot projects and by a Circle Assistant who performs analogous duties relating to rural libraries, public libraries, night schools and adult education centres established under the Social (Adult) Education Scheme. The establishment expenditure for this set-up during 1965-66 was Rs. 2,03,888.

Physical education and youth welfare

The District Officer for Physical Education and Youth Welfare looks after clubs and associations within the district organized for such purposes. He has also duties to perform in connexion with the national efficiency test drive. He is assisted by a District Organizer of Physical Education for inspection of schools imparting physical education. The establishment costs of his office for 1965-66 was Rs. 15,052.

Agricultural Income-Tax administration

For the purpose of the Bengal Agricultural Income-Tax Act, 1944, Howrah falls within the jurisdiction of Range I of the Agricultural Income-Tax Office at Calcutta staffed by an Agricultural Income-Tax Officer (Grade I), an Agricultural Income-Tax Officer (Grade II), an Inspector and the usual office personnel. The number of assessees, the demand and the collection figures for the district for 1965-66 were 351, Rs. 20,155 and Rs. 16,251 respectively.

Commercial Tax administration

The Commercial Tax office at Calcutta has jurisdiction over Howrah district as well and is staffed (for the purpose of this additional area) by 2 Commercial Tax Officers (Grade I), 7 Commercial Tax Officers (Grade II), 2 Inspectors of Commercial Taxes and the usual complement of office personnel. The establishment is responsible for assessment and collection of taxes under the Bengal Finance (Sales Tax) Act, 1941, the Bengal Motor Spirit Sales Taxation Act, 1941, the Bengal Raw Jute Taxation Act, 1941, the West Bengal Sales Tax Act, 1954 and the Central Sales Tax Act, 1956. The number of assessees (as on 31.3.66) and the approximate collections made

in the district under each of these Acts during 1965-66 are given below:

Name of the Act	No. of assessees	Approximate revenue collected in 1965-66 (Rs.)
The Bengal Finance (Sales Tax) Act, 1941	2,242	50,89,000
The Bengal Motor Spirit Sales Taxation Act, 1941	82	14,45,000
The Bengal Raw Jute Taxation Act, 1941	—	—
The West Bengal Sales Tax Act, 1954	64	2,85,000
The Central Sales Tax Act, 1956	1,145	31,03,000
Total		99,22,000

Against the gross revenue of Rs. 99,22,000, the collection charges for the year amounted to Rs. 78,000 approximately.

Food and Supplies administration

The District Controller of Food & Supplies, Howrah is in overall charge of the food and supplies organization of the district excepting the rationing branch which is directly under the supervision of a Deputy Controller of Rationing. The District Controller is assisted in his varied duties by an Assistant District Controller, 5 Chief Inspectors, 6 Inspectors and the usual office staff. His establishment expenditure during 1965-66 was Rs. 1,78,261.

Storage of food

The Directorate of Storage under the Department of Food and Supplies has 3 food depots in the district, 2 in Howrah town and one at Shalimar. There are 7 Chief Inspectors, 19 Inspectors, 72 Sub-Inspectors, and the requisite clerical and watch & ward staff for running these depots which entailed an establishment expenditure of Rs. 2,57,170 during 1965-66.

Transportation of food

The Receipt and Despatch Officer, Howrah looks after the operations within the district of the Directorate of Transportation under the Department of Food & Supplies. He has under him 3 Chief Inspectors, 8 Inspectors, 25 Sub-Inspectors, 16 Distributors and the usual office staff.

Rationing administration

Having been under modified rationing since May, 1957, the Howrah and Baly municipal areas came under statutory rationing on 5.1.65 which was extended to cover the Jagachha police station with effect from 22.2.66. Statutory rationing in these places is administered by the Howrah Sub-Control under the overall charge of a Deputy Controller of Rationing who is assisted by 6 Rationing Officers, one for each of the 6 sub-areas. Distribution of different rationed articles is arranged through 314 appointed retailers' shops (A.R. Shops) supervised by the sub-area rationing offices. Ration cards and other ration documents are also issued by them after necessary verification in each case. The Deputy Controller has also under

him a Special Officer, 6 Assistant Rationing Officers, 8 Chief Inspectors, 14 Inspectors, 60 Sub-Inspectors, 55 Assistant Sub-Inspectors and the requisite complement of office staff. Rs. 4,82,388 was spent as establishment cost for this set-up during 1965-66.

Fisheries administration

The District Fishery Officer is responsible for the implementation of piscicultural schemes within the district. He is assisted by 2 Assistant Fishery Officers, one for each of the two subdivisions and 2 Fishery Sub-Overseers to render technical assistance to these officers. The establishment expenditure, including that for the usual office staff, was Rs. 25,045 during 1965-66.

Rural water supply

An Assistant Engineer under the Public Health Engineering Directorate is in charge of implementing rural water supply schemes in the district. He is assisted by 2 Overseers, 2 Sub-Overseers, 2 Work Assistants, 11 Mechanics, 11 Assistant Fitters and 22 Helpers besides the usual complement of office staff. The establishment expenditure for this set-up for 1965-66 was Rs. 1,03,966.

Public Health Engineering administration

An Executive Engineer is the administrative head of all work appertaining to the Public Health Engineering Directorate in the district. He is assisted by 3 Assistant Engineers, 9 Sub-Assistant Engineers and other technical and non-technical personnel. The establishment cost for this office during 1965-66 was Rs. 1,41,968.

Information & Public Relations administration

Entrusted with Government publicity in the district through various media, the Field Information Officer has under him 3 Subdivisional Information Officers of whom the first exercises jurisdiction over the Sadar subdivision, the second over the Uluberia subdivision except Amta and Uday Narayanpur police stations which come under the third. A Technical Supervisor and 2 Laboratory Assistants supervise the installation and maintenance of radio sets while the Audio Visual Unit is looked after by an Operator assisted by 2 Assistant Operators. A Labour Information Officer, whose charge also includes the districts of 24-Parganas, Midnapur, Hooghly, Burdwan, Bankura and Birbhum, attends to publicity work in the industrial areas of the district. A Medical Officer and a Compounder treat exclusively the members of this large set-up. There is also a Zonal Artist for arranging exhibitions with jurisdiction extending over Howrah, Hooghly and 24-Parganas districts. Taking into account the usual clerical and transport staff, the establishment cost of this organization for 1965-66 was Rs. 90,000 approximately.

Irrigation administration

The district falls within the Hooghly Irrigation Division headed by an Executive Engineer with his headquarters at Calcutta. For Howrah, he is assisted by 2 Assistant Engineers posted at Amta and Phuleswar who have under them 9 Sub-Assistant Engineers, a Surveyor and the usual complement of office and inferior staff. Including the work-charged wing, consisting of 8 Work Assistants, 8 Gauge Readers and others, the total establishment expenditure for the entire set-up during 1965-66 was Rs. 1,68,320.

Labour & allied administration

Two Assistant Labour Commissioners assisted by 2 Labour Officers look after conciliation of industrial disputes and administration of the Minimum Wages Act in Howrah and Midnapur districts. They have under them 8 Labour Welfare Workers, 3 Doctors, 3 Compounders, a Physical Instructor, a Music Master and the usual office staff. The establishment expenditure for this set-up during 1965-66 was Rs. 81,145.

Exercising semi-judicial powers in matters concerning non-payment of wages to employees of shops and establishments, the Supervising Inspector of Shops and Establishments administers the West Bengal Shops & Establishments Act, 1963 and Rules, 1964 within the district. Besides the usual clerical hands, he is assisted by 3 Inspectors of whom two attend to work at Howrah, Baly and Belur, while the third does the same for the non-municipal towns of Uluberia, Amta, Bauria and Bagnan. They function as registering authorities for shops and establishments and have powers to launch prosecution for violation of the provisions of the relevant law. The establishment expenditure of this set-up during 1965-66 was Rs. 25,000.

Settlement administration

A Settlement Officer with headquarters at Hooghly is responsible for the revisional settlement in Howrah, Hooghly and Nadia districts, each of which is directly under a Charge Officer. The Charge Officer, Howrah, supervises preparation of records of rights, compensation assessment rolls under the West Bengal Estates Acquisition Act and is authorized to pay compensation to ex-intermediaries up to a small amount. Next in command is the Officer-in-Charge, Cadastral Camp, Howrah, who looks after cadastral work within the present limits of the Howrah municipality. There are besides 8 Special Revenue Officers (Grade II) employed as Revenue Officers, Compensation Officers and Assistant Settlement Officers in charge of settlement camps comprising one or more thanas of the district, 16 Kanungos (Grade I) employed as Revenue Officers and Compensation Officers attached to settlement camps, 62 Peshkars, 62 Janch Mohurrirs, 8 Sadar Amins, 34 Badar Amins and the usual office staff. The establishment expenditure incurred for this set-up during 1965-66 was Rs. 6,88,698.

Fire Service administration

The four fire stations in the district located at 430 Grand Trunk Road, 262 Grand Trunk Road, 57 & 58 Grand Trunk Road (81 & 86 Old Grand Trunk Road) and 122 J. N. Mukherji Road are meant to serve the Howrah, Sibpur, Baly and Lilua areas respectively. The last-named station is primarily intended for Civil Defence work.

While the Howrah Fire Station has 2 Station Officers and 5 Sub-Officers, each of the other stations has a Station Officer and a Sub-Officer only. Each station has besides the usual complement of Drivers, Leaders and Firemen, the total numbers of whom in all the establishments taken together are 24, 16 and 111 respectively. In

1965-66, 188 fire calls and 53 special jobs were attended to in the district.

Registration administration

There are 9 Registration Offices in the district, the respective headquarters and jurisdictions of which are given below:

Headquarters of Registration Office	Jurisdiction
Sadar	The whole district
Howrah	Howrah, Sibpur, Bantra, Golabari, Mali-Panchghara and Baly thanas
Domjur	Domjur, Jagachha and Sankrail
Bargachhia	Panchla and Jagatballavpur thanas
Amta	Amta and Uday Narayanpur thanas
Pancharul-Samantanagar	-ditto-
Bagnan	Uluberia, Bagnan and Bauria thanas
Uluberia	-ditto-
Syampur	Syampur thana

The district Registrar is in overall charge of the administration and attends to registration of documents at the Sadar office and solemnization of special and Hindu marriages. He is assisted by Sub-Registrars, each in charge of a subordinate Registration Office and performing almost analogous duties. The workload of the 9 Registration Offices during 1965-66 is detailed in the table below.

Registration Office	Number of documents registered	Receipts (Rs.)	Expenditure (Rs.)	Surplus (Rs.)
Sadar	4,332	1,63,376	51,213	1,12,163
Howrah	5,534	1,54,525	19,062	1,35,463
Domjur	4,504	54,825	16,736	38,089
Bargachhia	5,934	48,453	15,661	32,792
Amta	9,338	70,959	21,330	49,629
Pancharul-Samantanagar	1,886	15,317	6,998	8,319
Uluberia	8,347	62,187	19,838	42,349
Bagnan	5,583	40,913	15,561	25,352
Syampur	8,025	70,858	17,755	53,103

The volume of business transacted by these offices during 1965-66 in connexion with the Bengal Tenancy Act is shown in the following table.

Registration Office	Total Receipt (Rs.)	Expenditure (Rs.)	Surplus (Rs.)
Sadar	495	3,139	—
Howrah	227	—	227
Domjur	620	—	620
Bargachhia	682	—	682
Amta	1,093	1,264	—
Pancharul-Samantanagar	226	—	226
Uluberia	912	1,198	—
Bagnan	708	1,282	—
Syampur	1,065	1,315	—

Public Works administration

An Executive Engineer is in overall charge of all work relating to maintenance and occasional construction of public buildings in the district. He has under him 3 Assistant Engineers, 9 Sub-Assistant Engineers, 2 Draftsmen, 2 Tracers, 13 Work Assistants, 5 Road Mates, 3 Roller Drivers, one Carpenter and the usual contingent of clerical and inferior staff. The establishment cost for this organization during 1965-66 was Rs. 2,22,304.

Bengal Engineering College Construction Division

An Assistant Engineer assisted by 2 Sub-Assistant Engineers looks after the construction and supervision of buildings belonging to the B. E. College, Sibpur. The establishment expenses for this set-up for 1965-66 was Rs. 17,016.

Electrical Division

An Assistant Engineer holding charge of the Howrah and Uluberia Subdivisions of the Calcutta Electrical Division attends to the erection and maintenance of all public electrical works there. He is assisted by 3 Sub-Assistant Engineers, 3 Senior Work Assistants, 14 Junior Work Assistants and the usual complement of technical and non-technical staff. The establishment cost for this set up was Rs. 1,34,430 during 1965-66.

Roads administration

An Executive Engineer is in superior charge of public works administration in the district relating to roads. He is assisted by 3 Assistant Engineers, 9 Sub-Assistant Engineers and the usual technical and non-technical staff. The establishment expenditure for this organization during 1965-66 was Rs. 1,38,326.

Special Roads administration

The Special Roads set-up has 3 wings in the district, namely Howrah Special Road Division, Uluberia Special Road Division and Plant and Machinery Division. The first is headed by an Executive Engineer assisted by 3 Subdivisional Officers, 2 Assistant Engineers, 8 Sub-Assistant Engineers and the usual office staff The establishment expenditure for this Division during 1965-66 was Rs. 86,152. The second wing is under an Executive Engineer who is helped by 2 Assistant Engineers, 10 Sub-Assistant Engineers and the usual complement of office staff. The establishment costs for this

section during 1965-66 was Rs. 1,11,662. The third wing has its headquarters at Baly and is headed by an Executive Engineer assisted by an Assistant Engineer, 3 Sub-Assistant Engineers while its work-charged section consists of a Master Mechanic, 2 Mechanics, an Assistant Mechanic and other technical and inferior staff. The establishment expenditure for this wing in 1965-66 was Rs. 63,657.

Construction Board

An Assistant Engineer is in charge of the Howrah Construction Board Subdivision having jurisdiction over the whole district. Three Sub-Assistant Engineers help him in supervising constructional works.

Housing schemes

The work relating to Government housing schemes is looked after by an Assistant Engineer who is assisted by 2 Sub-Assistant Engineers. The work-charged wing of this organization is headed by an Assistant Engineer who has under him a Sub-Assistant Engineer, 22 Works Assistants and a fairly large contingent of technical and non-technical staff. An establishment expenditure of Rs. 1,11,289 was incurred for the entire organization during 1965-66.

Refugee Relief & Rehabilitation administration

The Subdivisional Relief and Rehabilitation Officer posted at Sadar assists the District Magistrate in all matters concerning refugee, relief and rehabilitation in the whole of the district. He has under him an Additional Subdivisional Relief and Rehabilitation Officer and 2 Additional Rehabilitation Officers to help him in miscellaneous enquiries and disbursement of grants and loans and a survey team consisting of a Kanungo, 2 Amins and 2 chainmen for survey and acquisition of lands, demarcation of boundaries, preparation of site plans etc. He also supervises the 22 Government Scheme Colonies for refugees in the district. The establishment expenditure incurred by this set-up during 1965-66 was Rs. 54,195

Social Welfare administration

The Casual Vagrants Home, Howrah takes care of the rehabilitation and reformation of able-bodied adult male vagrants and is administered by a Manager with the help of 2 Assistant Managers, a Junior Social Worker, a Medical Officer, 2 nurses, a compounder, 4 teachers and 4 instructors besides the usual clerical and inferior staff.

The Sundarbai Mulchand Mohatta Home, set up with a large donation from a private benefactor, renders analogous service for female destitutes. It is headed by a Superintendent who has under him 4 Assistant Superintendents, a Medical Officer, a Compounder, a Junior Social Worker, 2 teachers, 2 Inspectors for the weaving section, 2 craft teachers, a Technical Instructor and a Workshop Assistant besides certain clerical and inferior staff.

THE CENTRAL GOVERNMENT SET-UP

Income-Tax administration

For the purposes of assessment and realization of income-tax, there are two offices in the district—one for old assessees and the other (known as Special Survey Circle IX) for new cases. Two Class I and 6 Class II Income-Tax Officers (who have assessing and collecting powers) man these offices with the help of 12 Inspectors whose duties

relate to investigation and survey of accounts etc. There are besides 2 Supervisors (Grade II) and the usual clerical and inferior staff. The number of assessees, tax demand, total collection and collection charges for 1965-66 were 21,354, Rs. 1,17,82,000, Rs. 57,27,000 and Rs. 3,63,759 respectively.

Postal administration

A Senior Superintendent of Post Office heads the Howrah Postal Division and has under him a Gazetted Postmaster, an Assistant Superintendent of Post Office, 2 Deputy Postmasters besides 5 Inspectors of Post Office, 13 Assistant Postmasters, 60 Sub-Postmasters, an Assistant Sub-Postmaster, 202 Extra-Departmental Branch Postmasters, 4 Town Inspectors, 4 Wireless Licence Inspectors and a large contingent of regular and extra-departmental clerical and delivery staff. The establishment expenditure for this large organization during 1965-66 was Rs. 1,97,78,034.

National Savings organization

The Assistant Regional Director in charge of Circle 'A' of Burdwan Division looks after the national savings organization in the district. He has under him 3 District Organizers whose duties include publicity and propaganda in respect of small savings schemes, organization of Pay Roll Groups and maintenance of liaison with post offices. Besides Howrah city, which is their common charge, one of them exercises jurisdiction over the Baly-Jagachha, Domjur and Panchla block areas while another looks after the blocks Syampore I & II, Bagnan I & II and Uluberia I & II and the third supervises work within the Sankrail, Jagatballavpur, Uday Narayanpur and Amta I & II blocks. There are some 190 authorized agents for effecting sales of National Savings securities through post offices. The number of Savings Bank accounts opened in various Post Offices and the number of Pay Roll Groups operated during 1965-66 were 12,774 and 40 respectively. Three Model Savings Villages have also been planned at Abhaynagar, Jaypur Bill and Belanagar, all within the Baly police station. The organization made a net collection of Rs. 56,73,402 during 1965-66.

Customs & Excise administration

The district falls within the administrative jurisdiction of the Collector of Customs, Calcutta who has under him 2 Inspectors and 3 Sub-Inspectors for supervision and clearance of goods imported from or exported to Pakistan and an Inspector to look after the storage of seized goods. The establishment expenditure of the set-up for 1965-66 was Rs. 51,464.

For realizing Central excise duties in the district, there are 2 Junior Superintendents assisted by 24 Inspectors and 2 Sub-Inspectors accounting for an establishment expenditure of Rs. 1,06,978 during 1965-66.

AUTONOMOUS BODIES

The Life Insurance Corporation of India has a branch office at Howrah and a sub-office at Sibpur inaugurated on 1.9.56 and 1.9.62 respectively. The former has its jurisdiction over the whole district

Life Insurance Corporation of India

except the police stations of Sankrail and Panchla and the rural areas of Sibpur thana which fall under the latter including that part of the Sibpur P.S. as is within Howrah city. A Development Centre under the branch office was started on 23.4.62 for work within the Uluberia subdivision. The branch office at Howrah is headed by a Branch Manager under whom there are 2 Assistant Branch Managers (Development), 33 Development Officers and the usual contingents of clerical and inferior staff. The Sibpur sub-office is under an Assistant Branch Manager who is assisted by 12 Development Officers, clerks and inferior personnel. The establishment expenses for the whole set-up during 1965-66 were Rs. 5,94,356.

Food Corporation of India

A District Manager under the recently set up Food Corporation of India is in charge of procurement, storage and supply of cereals within the district. He has under him an Assistant Accounts Officer and the usual complement of office staff.

West Bengal State Electricity Board

The West Bengal State Electricity Board has two establishments in the district for operation, maintenance and construction. The former is under a Divisional Engineer who is helped by 2 Assistant Engineers, a Sub-Assistant Engineer, 4 Station Superintendents, 7 Junior Station Superintendents, 2 H. T. Superintendents and a large contingent of technical, clerical and inferior staff. The establishment expenditure for this wing amounted to Rs. 36,86,480 during 1965-66. The construction wing is headed by a Divisional Engineer who has under him 3 Assistant Engineers and a small complement of clerical and inferior personnel. The establishment cost for this set-up during 1965-66 was Rs. 41,317.

CHAPTER X

REVENUE ADMINISTRATION

LAND REVENUE ADMINISTRATION

History of land revenue assessment & management

Any attempted sketch of the system of land revenue administration obtaining in very early times in the tract now comprising the Howrah district is bound to be highly conjectural. However, it is permissible to deduce from the *Dharma Sutras* and such other texts that under the Hindu system of revenue management, the village or the *grām* was the lowest unit of administration, and that except for the homestead lands, the village commons and the waste lands, all other plots were classified into rent paying and non-rent paying lands, the latter being composed of those assigned to priests, gods or religious institutions and service or *chakran* lands. The service lands were held by different occupational groups like barbers, washermen, carpenters, smiths, watchmen and accountants "whose duties to the community were directly connected with the land and its crops."[1] The collection of land revenue was almost universally entrusted to the headman, or the *mandal* of the village. In the last Settlement Report of the Howrah district, the ancient practice was explained thus: "The headman of the village, who was called *mandal*, had also a share in the village land by virtue of his office. He collected the rents due from the villagers, the amount of which sometimes varied according to the caste or the position of the tillers; it also varied according to the nature of the produce, those growing special crops being assessed to a higher rental. The usual share reserved for the king was one-sixth, rising to one-fourth or even one-third in special instances; the village servants also received small shares of the produce at the time of reaping and threshing."[2]

With the conquest of Bengal by the Turko-Afghans, the Khalji rulers introduced a new system broadly based on 'irregular exactions' and 'enforced tributes' intended to extract the maximum revenue within the shortest possible time. Some attempts at systematizing the procedure were made by the Balbani Sultans of Bengal, who held sway over the Hooghly region. The country under them was divided into revenue divisions called *Mahals* and *Arsahs* supervised by various categories of revenue (civil) and military administrators.

Some very important changes in the revenue set-up occurred during the reign of Sher Shah which formed the basis of Todar Mall's rent-

[1]R. C. Sen & S. C. Chatterji—Final Report on the Survey and Settlement Operations in the District of Howrah. 1934-39. Calcutta, 1940. p. 15.
[2]loc. cit.

roll (at least for Bengal). Sher Shah's revenue administration has been described in the aforesaid Settlement Report in the following words: "Sher Shah appointed in every pargana an Amil, a 'God-fearing' Sikdar, a treasurer, and two Karkuns, of whom one was to write in Persian and the other in local vernacular. He ordered his Governors to measure the lands in every harvest, to fix the assessment with regard to the kind of the grain they produced, to give one share to the cultivator and a half share to the mukaddam or headman. In every pargana there was also a kanungo, from whom were ascertained the present, past and probable future state of the crops and revenue. In every Sarkar he appointed a Chief Sikdar and a Chief Munsif to watch the conduct of the Amils and of the people, to see that the Amils did not oppress or injure the people or embezzle the king's revenue, and also to settle disputes between Amils regarding the boundaries of parganas. It is said that the king changed the Amils every year or second year, to prevent their oppressing the people or embezzling the revenue."[1]

This set-up remained practically unchanged after the Mughal conquest of Bengal. According to the Ain-i-Akbari, the fifteen provinces or subahs which made up Akbar's empire were divided into sarkars, which again were subdivided into mahals. The subah of Bengal was composed of 24 sarkars (including five in Orissa). "Of the 14 parganas now recorded in Howrah the following ten, viz., (1) Mandalghat, (2) Kharija Mandalghat, (3) Balia, (4) Boro, (5) Khalor, (6) Muzaffarpur, (7) Bhursit, (8) Arsha, (9) Dharsah, and (10) Chitra are found in the Ain-i-Akbari. The sarkars to which they related and the revenue payable for them are noted below:

"Name of the Mahals	Revenue in dams*
(*i*) *Sarkar Satgaon*	
(1) Purah (Boro)	6,52,470
(2) Baliya (Balia)	94,725
(3) Kharar (Khalor)	3,65,275
(4) Arsa Tawali (Arsha)	1,17,445
(5) Muzaffarpur	1,08,332
(*ii*) *Sarkar Sulaimanabad*	
(6) Bhosat (Bhursit)	1,96,990
(7) Dharsah	95,250
(*iii*) *Sarkar Mandaran*	
(8) Chatwa (Chituya)	8,06,542
(9) Mandalghat including	
(10) Kharija Mandalghat	9,06,775"[2]

[1] Ibid. p. 16.
*During Akbar's reign one rupee was equivalent to 40 dams.
[2] Ibid. p. 18.

In an explanation of the composition of the above three sarkars and how they came to be formed, the following passage occurs in the said Settlement Report: "The original sarkars were evidently Satgaon on the east and Mandaran on the west but during the Afghan rule a number of mahals were taken from both and grouped into a new sarkar, named after the Sultan Sulaiman Kararani, which cut through the middle of Sàtgaon. Roughly, the two districts (Hooghly & Howrah—Ed.) as now constituted appear to account for a third of the three sarkars. ... The landlords belonged to various castes, and besides paying revenue had to furnish a force of 300 cavalry and 18,000 infantry. In addition to the zemindars there were holders of Akta or Jagir land, of which small allotments were scattered throughout the sarkars."[1]

Todar Mall's rent-roll was revised in 1648, during the second viceroyalty of Shah Shuja, "who revised the settlement chiefly by adding the revenue of the new territory in the north-east, of the Sunderbans in the south, and of Midnapore and Balassore, which had been detatched from Orissa."[2] Although there was no rearrangement in the system of collection or regarding the revenue divisions, an increase in the revenue demand (and consequently in collection) was effected "by a new hastabad valuation of old Sarkars, amounting to more than a seventh of the former assessment."[3]

It was, however, during a third revision carried out by Murshid Quli Khan in 1722 that a thorough reorganization was introduced. The subah of Bengal was divided into thirteen *chaklas* (roughly corresponding to present day districts), while the number of *parganas* was also increased. "Hooghly and Howrah districts fell under two chaklas, the riparian strip under chakla Hooghly or Satgaon and the remainder under chakla Burdwan, those two chaklas being assessed to a revenue of Rs. 37.83,815 That amount was increased, however, by more than one-fourth by means of annual hastabud accounts and resumption of Jagir lands. During Jafar Khan's rule (Murshid Quli Khan—Ed.), the zemindars were formally recognised as regular landlords and held personally responsible for the land revenue of their estates."[4]

In 1728, a fresh settlement was made by Shujauddin, and the *khalsa* lands were converted into big or small zemindari tracts, "the present districts of Hooghly and Howrah being comprised in the larger zemindary of Burdwan (revenue Rs 20,47,506) and the mazkuri or smaller zemindaries of Mandalghat (Rs. 1,46,261), Arsa (Rs. 1,25,351) and Mahammad Aminpur (Rs. 1,40,046) These zemin-

[1]ibid. p. 16.
[2]loc. cit.
[3]loc. cit.
[4]loc. cit.

daries did not include the small jagirs, chiefly madadmash or subsistence lands, given to religious and learned men."[1]

From John Shore's well-known Minute of 1789 we come to know that the amount of land revenue for Bengal registered an almost ninety per cent increase from the time of Shujauddin's settlement of 1728 till the Permanent Settlement in 1793 as would appear from the following figures reproduced in the said Settlement Report.[2]

		Rs.
"Todar Mall's settlement	1582	1,06,93,152
Sultan Shuja's settlement	1658	1,31,15,907
Murshid Kuli Khan's settlement	1722	1,42,88,186
Suja-uddin's settlement	1728	1,42,45,561
Permanent settlement	1793	2,68,00,989"

Apart from land revenue proper, there were extra cesses and dues known as abwabs which varied in item, incidence and amount from one locality to another. "Mr. J. Grant. . . in his Analysis of the Finances of Bengal, enumerated no less than twelve (types of abwabs —Ed.), including the one imposed by Murshid Kuli Khan, four imposed in the time of Shuja-uddin, three in the time of Ali Vardi Khan, and four more by Mir Kasim Ali. The abwabs, fluctuating in demand and gradually increasing in amount, were highly oppressive both to the raiyats and the zemindars, and could only be realised with a great deal of trouble. After the establishment of British rule a new system was gradually introduced."[3]

As already mentioned, a number of parganas of the Howrah-Hooghly region became incorporated within the large zemindari of Burdwan at the time of Shujauddin's settlement. In a reference to the transfer of such lands, the Settlement Report stated: "Pargana Mandalghat together with parganas Arsha and Chandrakona were annexed to the Burdwan Raj Estate by Raja Chitra Sen Rai. It is not definitely known who held these parganas before but it is believed here that one Mukunda Prosad Rai Chaudhuri, who . . . established the Rai Choudhuri family of Mughkalyan, held pargana Mandalghat before this time."[4]

When the district of Burdwan, along with Chittagong and Midnapur, was ceded to the East India Company by Mir Kasim in 1760, the present districts of Hooghly and Howrah, except for a strip of land on the west bank of Bhagirathi, also came under the Company's management. Five years later, at the time of the grant of the Diwani,

[1] ibid. p. 17.
[2] loc. cit.
[3] loc. cit.
[4] ibid. p. 18.

this strip was also taken over by the Company administration. "At first the collection in the Burdwan Zemindari lands were supervised by covenanted servants of the Company, but this system proved a failure, for after defraying the expenses of reducing the refractory Raja, the collections amounted in the first year (1760) to only Rs. 5,23,691 or one-fifth of the demand, and they were also small in the second year. In 1762 the zemindari was let out by public auction to temporary farmers for three years. The latter failed to discharge their agreements, and to help them, an impost of 9 annas per bigha was levied on all the *Baze Zamin* or revenue-free alienations."[1]

When the Company became the Diwan in 1765, Verelst was appointed the first Supravisor of Burdwan, which, as mentioned above, included the greater part of the districts of Hooghly and Howrah. "He restored the old system of managing the revenue and gradually improved the *hustabud* collections, until in 1770 the receipts amounted to Rs. 47,18,918 and the charges to Rs. 6,61,486 leaving a net income of Rs. 40,57,452. The famine of that year caused a considerable diminution in both the demand and the collections which continued for several years. In 1783 the gross demand was Rs. 43,58,026, the net demand being Rs. 37,35,755 but the collections were only Rs. 36,96,825 including arrears. As regards Mahammad Aminpur, the revenue (with Abwabs) amounted to Rs. 3,38,560 in 1765, the year of the grant of the Dewani, but by 1783 it had fallen to Rs. 2,55,113. How heavy the abwabs were may be realised from the fact that in the latter mentioned zemindari they aggregated in 1765 to Rs. 1,34,425 on a total revenue of Rs. 2,06,325 or not less than 65 per cent; while in the Burdwan zemindari they amounted in 1760 to Rs. 8,49,099 or nearly 38 per cent of the revenue demand (Rs. 22,51,306)."[2]

In 1784, according to the provisions of the Pitt's India Act, the Company was directed to take steps for the development of a permanent system of settlement of land and management of revenues. This was confirmed and elaborated by a despatch of the Court of Directors in 1786, and simultaneously, Lord Cornwallis was appointed the Governor-General of the Company's territories in India. The new Governor-General promptly initiated inquiries into the existing system of land revenue and rent resulting in the introduction of Permanent Settlement in Bengal in 1793.

In tracing the history of the land revenue of the area, the Settlement Report of Howrah noted that the lands falling under the zemindari *chakla* Burdwan had a higher revenue valuation than was to be usually found elsewhere in Bengal.[3] This was true even of the period before British administration, but the revenue of the zemindari

[1] ibid. p. 18.
[2] ibid. p.p. 18-19.
[3] ibid. p. 23.

apparently registered a big increase following the transfer of the sovereignty to the East India Company. Partly as a result of this, a prolonged dispute ensued between the Raja of Burdwan and the Company administration. "The relation between them was embittered until the Maharaja became refractory and ultimately this became the direct cause of a change in the system of revenue administration, though only for a few years, which led to a still further considerable increase in the revenue of the Burdwan zemindari. This must have had its repercussions on the rents of the tenants. Temporary settlements in farm with irresponsible persons whose natural greed must have got further incentive by consideration of the short periods of their farm having to be utilised to their best advantage added to the amount of the rent. Cultivation of mulberry was carried on a very large scale in the area now included in the Howrah district. It was a very profitable concern and was one of the factors which facililtated the speedy process of raising the rents. The existence of a very large number of rent-free holdings is a peculiar feature of the locality and makes the burden of revenue high on the rent-paying lands."[1]

The pargana Mandalghat, a large part of which lay within the present district of Howrah, was also assessed very high, the reasons for which were described in the Settlement Report as follows: "There is also a belief very widespread in the locality that a portion of the original Mandalghat pargana was sold for arrears of revenue of the Burdwan Raj: this was at a time of great hardship of the Maharaja, when a great famine had visited his zemindari. It is said that Dewan Ganga Govinda Sinha who was at that time practically at the head of the financial arrangements of the Company, took compassion on the Maharaja and, to give him a little relief, allotted the greater portion of the revenue borne by the whole of the pargana to the portion that was sold and separated from the zemindari under the name Mandalghat (the name of the whole pargana) and a proportionately much lower revenue to the portion of the pargana which continued to be within the zemindari under the name of Kharija Mandalghat. The revenue of the separated Mandalghat pargana was thus increased in enormous proportion. These appear to be the reasons for the high revenue of the estates of the Burdwan zemindari in general, and the Mandalghat pargana in particular, which latter covers a large area of the district. The practice of creating many *patnis*, which is largely prevalent here, may still be another reason responsible for the high rates of rent, the *patnidars* trying to realise their own tolls of profit. Construction of embankments (to whomever the credit may be due) also appears to have been successfully utilised by some landlords to enchance the already high rents even more.

[1]ibid. p. 24.

"Another cause of the high rate of rent is the great demand for land. A great many people supplement their income from land by their earnings from mercantile offices and mills where they serve either for the whole of the year or for a part and also from other professions, for which proximity to Calcutta offers a very good scope, but the area per head of the population seems to be very small compared with that in other parts of the province, while the bulk of the population are still dependent on agriculture. The density of population comes to about 1.516 per square mile and the area per head of population, to only 0.42 acre, a low figure indeed. The great demand for land here and the consequent apprehension of loosing it on default of payment of rent, will account for the high rate of rent better than the productive power of the soil.

"Another main cause of the high rate of rent however is the prevalence of the *kut-khamar* system. The rent in a *kut-khamar* tenancy amounts to the market price of half the produce, while in a cash rent tenancy, it is roughly equal to the market price of about ¼th the produce, i.e., the rent of a *kut-khamar* tenancy is generally almost the double of an ordinary tenancy. Not only is this high rate partly retained while a kut-tenancy is converted into an ordinary tenancy but the high rate of rent in the *kut-khamar* area influences the neighbouring area and operates to bring up the general rate of rent. It is however worthy of note that while the rate of rent is undoubtedly very high in comparison with other parts of the province, the percentage of realisation also is very high."[1]

The history of the changes in the proprietorship of lands in pargana Mandalghat was narrated in the Settlement Report as follows: "After the separation of the Mandalghat pargana from the Burdwan zemindari (part of which continued to be within the zemindari under the name of Kharija Mandalghat) the pargana passed into the hands of the Burman Babus of Singur who divided it into five *toks*, each called under a different name after the principal village in the *tok*, namely—Tok Bagnan, Tok Bainan, Tok Dihi Mandalghat, Tok Durgapur and Tok Rabibhag. All the *toks* in course of time, passed out of their hands, one, viz., Tok Bagnan going to the Choudhury Babus of Khulna (Satkhira) and the remaining four going at first to the Raja of Mahishadal and ultimately in 1854 to the Seal Babus of Calcutta, heirs of late Matilal Seal. With the decline of their prosperity the Choudhury Babus had to sell away portions of their *tok*, and are now in possession of only five annas share of the *tok*; of the remaining 11 annas, eight annas is now owned by the heirs of Raja Hrishikesh Law of Calcutta and three annas by those of Raja Janakinath Ray and brothers of Bhagyakul, Dacca. Though however the ownership of the proprietary right of the *tok* has been divided and the shares

[1]loc. cit.

changed hands, its integrity has not yet been destroyed and has been left undisturbed in the arrangements made among the proprietors. The Choudhuries, Laws and Rays, the present owners of the *tok* which formerly belonged exclusively to the Choudhuries, form one group of proprietors and the heirs of Matilal Seal (owner of the other *toks*) form the other group, and each group is in separate and exclusive possession of separate villages. The lands of the mahal lie in the districts of Hooghly, Midnapore, Burdwan, Bankura, Birbhum and Howrah, but mainly in Midnapore and Howrah. These do not comprise compact blocks but lie scattered, interspersed with the lands of other mahals; in Howrah the mahal covers south-western portions of the district."[1]

In order to augment revenues, the general practice during British rule was to resume alienated or revenue-free lands which included *chaukidāri chākrān* and *fānridāri chākrān* lands. The former, after resumption, were transferred to the zemindars of the estates to which they belonged and the assessment was made at half their annual value. The revenue collected went to the fund of the Panchayati Unions or Union Boards concerned. The *fānridāri chākrān* lands were a variety of the *thānādāri chākrān* lands but were smaller in extent. Undoubtedly, they were a relic of an earlier age, for during the Mughal period public servants were in many cases given grants of land instead of cash salaries. Speaking about the *fānridāri chākrān* lands in the district of Howrah, the Settlement Report observed: "It was extensively current in the district of Howrah, and the Thakbust maps of many villages show some chaks marked out as the Faridari chakran of a certain Chaukidar."[2] The Report, however, warns that "the careless use of the word 'Chaukidar' should not lead to a confusion with the Chaukidari chakran lands. .. The functions of the Chaukidar and the Thanadar were quite different. The main duty of the Chaukidar was to keep watch within the village, and he was primarily responsible to the Panchayat of the village (or to the Zemindar where the panchayet system had fallen into disuse). The Faridar on the other hand had to keep himself informed of the movements of all dangerous characters and suspects and was responsible to police officers of Government. ...The Thanadars rendered the services more analogous to those of Ghatwals who were set up in the frontier districts of Midnapore, Birbhum and Bankura to stem the advance of the Marhatta cavalry. While the Ghatwals kept watch on the movements of the enemy coming from outside, the Thanadar did so over the movement of the criminals living within the province. Thus Faridars were considered as being in employment of Government, and the Chaukidars in that of a local body (the village Panchayat or in its absence the village Zemindar)."[3]

[1-2]ibid. p. 21.
[3]ibid. pp. 21-2.

Another point of difference between these two types of service holdings was that in the case of the *chaukidari chakran* lands, they were included within the estate of the zemindar, and on resumption, the zemindar was entitled to a permanent settlement on the resumed lands, although a small amount was possibly due to the Village Panchayat or Union Board "in consideration of the service that it has been so long receiving from the Chaukidars and for which it will have to pay now in cash."[1] The *fanridari* lands, on the other hand, could be resumed by the Government only, when it considered that it had no longer any need of the services of the *fanridars* or *thanadars*, and on resumption the lands would vest in the Government. Thereafter, such lands were constituted into separate estates and were settled with private proprietors either temporarily or permanently or were kept under the *khās* management of the Government. The *chaukidāri chākrān* lands, after resumption, were not constituted into separate estates, but formed "part of the parent estates subject to the payment of an additional revenue payable to the panchayats."[2]

The Settlement Report listed three main types of land tenure found in the district, viz. (*i*) *Patni* tenures (including the subordinate *Darpatni* and *Se-patni* tenures), (*ii*) *Mukarrari Maurasi* tenures, and (*iii*) *Ijaras* (including *Dar-Ijaras*). About the first, C. N. Banerjei observed: "The Putnee tenure is one of a peculiar nature, originating with the Rajah of Burdwan previous to the year 1819."[3] But the Settlement Report gives the date of its origin as 1799, being created by Maharaja Tej Chandra of Burdwan.[4] C. N. Banerjei further said: "The tenure was allowed to be held at a rent fixed in perpetuity by the lessee and his heirs for ever. The tenant had to furnish collateral security for the rent, or his general conduct, or he is exempted from this obligation whenever the Zemindar may think proper, but the Zemindar may, if he chooses, require security in the event of the tenure being sold for arrears of revenue, or in the occasion of the installation of a new tenant. The tenure is liable to sale for arrears of revenue, and if the proceeds of the sale do not satisfy the arrear due, the remaining property of the defaulter is liable to sale."[5] About the under-tenures of the *Patni taluks* it was said: "These tenures are underlet to four degrees sometimes, on precisely the same conditions and are valid, heritable, and transferable, and made answerable for the present debts of the holder."[6] In effect then, a *Patni* was a lease which bound the holder by terms and conditions similar to those by which the landlord was bound to the State. "Since the passing of the

[1]ibid. p. 22.
[2]loc. cit.
[3]C. N. Banerjei—An Account of Howrah: Past and Present. Calcutta, 1872. p. 42.
[4]R. C. Sen and S. C. Chatterji—op. cit. p. 47.
[5]C. N. Banerjei—loc. cit.
[6]R. C. Sen and S. C. Chatterji—loc. cit.

Patni Sale Law, this form of tenure has been very popular to zemindars, who wish to get rid of the direct management of their property, or who wish to raise money in the shape of a premium."[1]

Mukarrari Maurasi tenures were hereditary holdings at a low rent fixed in perpetuity. "At the creation of Mukarari or dar-mukarari tenures the lessees usually pay a salami. Dar-mukararis are subordinate to Mukararis and are created by the mukararidar. These tenures are also permanent with fixed rents and their rights and incidents follow, in the absence of special provisions, those of the parent tenure. Dar-mukarari tenures are not however very common."[2] C. N. Banerjei, however, pointed out that when the East India Company granted the *Mukarrari* leases there was a tacit understanding that they were grants only for a life-time. "These became in time to be grants made by proprietors of large estates as provision for the dependant relatives, or for religious and charitable purposes, on which some required khiraj was levied. These grants were sometimes only subject to small yearly payment."[3] A variation of the *Mukarrari* type of tenure was the *Istemrari* which was also a lease in perpetuity and "the rents of which could never be enhanced."[4]

Ijaras were a form of lease held at a defined rent or revenue either directly from the Government or from an intermediary landlord. "The status of Ijaradars or farmers and their subordinate dar-ijaradars differ widely from that of other intermediate tenure-holders described above. Ijaradars hold farming leases by which a defined amount of annual rent is fixed for a specified term, usually varying from 5 to 30 years. Such leases are granted not only by the zemindars or superior landlords but also by subordinate talukdars or tenure-holders in an estate. The lessor cannot enhance the rent of ijara lease during this term; and on its expiry the ijaradar is not entitled to renewal. If the latter is not specifically, by the conditions of his lease, debarred from creating an under-tenure, he occasionally creates dar-ijara tenure, the term of which cannot, of course, be longer than that of his own lease."[5]

Rent-free tenures or *Lakhiraj* holdings, apart from service or *Chakran* lands, were quite numerous in Howrah district. Of these, the most prominent was the type known as (1) *Niskar* or rent-free land granted for some special purpose. These were a form of gift and did not usually connote any obligation in return. Other similar holdings could be classified into three broad categories: (*a*) Hindu religious grants, (*b*) Muslim religious grants, and (*c*) miscellaneous. In the first group could be found such types of land-holdings as (2) *Debottar*, (3) *Brahmottar*, (4) *Mahātrān* and (5) *Vaishnavottar*. Under

[1]ibid. p. 48.
[2]loc. cit.
[3]C. N. Banerjei—op. cit. p. 43.
[4]loc. cit.
[5]R. C. Sen and S. C. Chatterji—loc. cit.

the second category came (6) *Pirottar*, (7) *Wakf* or *Wakif*, (8) *Chirāgi* and (9) *Nasarat* land. The (10) *Khairāti* and (11) *Khānābāri* lands were not religious grants; the former was gifted for charitable purposes, and the latter as homestead lands.[1] Most of the *Niskar* holdings were claimed on the basis of some zemindari grants, but the Settlement Report noted that it was in many cases easy to put forward fraudulent claims since many landlords, specially the smaller ones, did not maintain even "rudimentary papers" concerning the rights in lands within their estates.[2]

The various types of service-tenures or *Chākrān* lands held in return for some private service like that of a barber or a washerman, usually found in other parts of Bengal, were not very common in Howrah. "The only kind of service tenant now found in existence is for service of a quasi-public character, viz., for conducting the worship of the village deity. ...In these cases in lieu of rent, the tenant renders personal service, by way of conducting the worship. The office is not heritable nor the land."[3] About such service lands, the Settlement Report further stated: "This must be distinguished from the possession of a *sebait* of a debottar property. Both the office of the *sebait* and property enjoyed by him, is heritable. No personal service is required from the *sebait*. ...The terms of possession can hardly be distinguished from those of our ordinary proprietor—the word debottar being allowed to continue as only a legal fiction. Where the status of a priest is that of a *chakran* tenant . . . the growing sense of democracy in the people now demands . . . that the function of the *sebait* be recorded as resting in a Board of five representative villagers. The zemindar usually opposed the demand, and claimed to be the *sebait* as a natural course of things. In most cases, it was found that the village Board took active interest in managing the daily and the annual pujas, often supplementing the income by voluntary subscription, while the zemindar or the patnidar could not produce any evidence of participation in the management of the divine service and in such cases the representative Board was recorded as the *sebait*."[4]

Under the zemindari system in Bengal, the raiyats formed the pivot of all tenancy legislation and there could be only one grade of them although numerous other types of tenure-holders and under-raiyats actually existed. Before the abolition of intermediary rights in land, the *Mukarrari* raiyats occupied the foremost place, both in number and status.[5] Next in importance came the 'settled' raiyats who paid rents in cash or in produce. Although there were no simple 'occupancy' raiyats in the district at the time of the

[1] ibid. pp. 48-49.
[2] ibid. p. 49.
[3] loc. cit.
[4] ibid. pp. 49-50.
[5] ibid. p. 51.

settlement operations (1934-39), there was quite a number of non-occupancy raiyats, who also paid cash rent, produce rent or both.

As noted earlier, the *kut-khamar* type of holding was important in Howrah. "The *kut-khamar* tenure", according to the Settlement Report, "is the system wherein the rent of the holding is determined every year afresh, by the system of *kut* or the appraisement of the crops while they are still standing on the field. The landlord's *gomosta* goes to the field along with the leading raiyats and estimates the probable outturn of each plot and writes it down on a paper, wherein the signatures of the raiyats are taken in token of their having accepted it. This paper is called *kut-takinama* or *kut*-estimate. The estimated outturn for all plots of the holding are then added together in a paper called *kut-khatian* and the value of the tenant's share of the produce worked out at the market price. This is taken to be the rent of the holding for the year. The rate of the price of paddy and straw is noted in a paper called *biki-batwara* (division of the sale proceeds). The raiyats are consulted in fixing the rate. But their signatures are not taken on the *biki-batwara*."[1]

It further added: "The essence of the system is that the raiyat pays a fixed share of the paddy (generally a half share, and occasionally 22 seers in the maund or a 11/20th share) or the value thereof, as the rent of the holding. Sometimes the price of the straw is added to the price of the paddy in making up the rent. The rent is generally inclusive of road cess, but sometimes road cess is realised in addition.

"At the start, there was a general claim made by the landlords that these produce-payers come under the proviso to section 3 (17) of the Bengal Tenancy Act, and should not be treated as tenants. As *bhagdars*, they should be ignored from the records and no question of the accrual of the right of occupancy should be considered. Some landlords went also the length of asserting that the name *kut-khamar* implies that these lands are the *khamar* lands of the landlords and under section 116 of the Bengal Tenancy Act accrual of occupancy right is barred in these lands.

"The question was carefully considered and it was decided that these persons should be recognized as raiyats and as such considered entitled to the right of occupancy. The facts that these holdings were generally found to be heritable and transferable and in some cases the occupant seemed to have been recognized as a tenant by the terms of the *kabuliyat*, unmistakably proved them to be tenants."[2]

Although *bhāgdārs* or share-croppers were not considered raiyats and did not have analogous rights, produce-paying tenants

[1]loc. cit.
[2]ibid. p. 52.

paying a fixed amount in kind enjoyed a raiyati status and its privileges.[1]

This brief account of the revenue administration of the district would remain incomplete without a reference to the unique settlement history of a tract of urban land in and around the present Howrah *maidan*. "Howrah is divided", says C. N. Banerjei, "into two shares, the ten annas and six annas. The ten annas share . . . was purchased by Hurish Chunder Roy of the Sharafooly family, and the six annas share by Kally Persad Roy. Radhakanta Deb subsequently bought from the ten annas shareholder part of Howrah, and the Koondoos of Moyeree purchased Sulkea from the six annas shareholders.

"The Maidan, a portion of the Railway Company's premises, and the different large old buildings in the Maidan were all originally included in one lot. The Cutcherry house was built about the year 1767 A.D. for a rum distillery. In a few short years it passed into the hands of Levett, and was known as 'Levett's gardens'. In 1785 A.D. the premises were purchased by the Military Orphan Society, in whose occupation it remained till 1815. . . . The premises were (thereafter) divided into three portions, one was allowed to the Customs Department Officer, a second to the Magistrate of the 24-Pergunnahs for holding a periodical court. To this portion the Civil court of Sulkea was transferred in a few years. A third portion was made over to the resident Clergy of Bishop's College, in consideration of their services in performing Divine Service at Howrah. When a Magistracy was established here in 1843, the Magistrate's court was located in that portion of the building which accommodated also the Court of the Sulkea Moonsiff, and the offices of the Salt Department subordinate to the Custom's Office. ...Three years later (in 1851—Ed.), the Missionaries had to give up using the house, as the portion they occupied was required for a public purpose. The Customs Department vacated the portion occupied by them in 1859. One house is now the residence of the Magistrate, and the other buildings accommodate the different courts.

"In 1847 the land in the Maidan underwent a measurement, and was found to be 137 bighas 2 cottahs and 3 chittacks; the original quantity was said to have been 160 bighas and 1¼ cottahs; but it must be borne in mind that a part of the land fell in the Grand Trunk Road, besides the detachment of a site of about 5 bighas for the erection of the Church. The annual rental Sicca Rs. 320-2-8 used to be paid by Government to the Zemindars for the original piece of ground. A deduction has been made since the Grand Trunk Road and the Church were constructed. Government now, under the Istemrari lease by which they hold the land, have only to pay Sicca Rs. 276-9-5 to,

[1] Ibid. p. 53.

		Sa. Rs. As. P.
"1. Radhacant Deb, for 10 bighas		58 14 0
2. Jogen Chunder and Porno Chunder Roy the 10 annas share-holders, for 29 bighas 2 Cottas and 3 Chittacks		165 3 5
3. The Lakhirajdars for 27 bighas, Joy Narrain Sattra, ..	Sa. Rs. 48 0 0	
and Sorbo Mongola ..	4 8 0	52 8 0

"At so late a period as 1848, it was decided to keep an open space to be called the 'Howrah green', for the health of the public, and the site fixed upon, as most eligible for the purpose, was the premises of the old Military Orphan School, on which no cluster of buildings had been erected.

"To the east of these premises in 1815 A.D. was the estate of one Mr. Cockrane which, on his demise, came to the possession of Messrs. Stewart and Robinson, and Messrs. Fairlie and Co., and subsequently formed the sites for the depots of the different Coal Companies, stretching beyond Telkul ghat on the south. The depots have all been now removed to the north of Telkul ghat, and fall within the premises of the Railway Company."[1]

Present system of survey, assessment and collection of land revenue etc

The West Bengal Estates Acquisition Act of 1953 came into force in two stages, in April 1955 and in April 1956, with the result that intermediary rights in land ceased to exist. The actual cultivator of the soil was thus brought into direct relation with the State of which he became the tenant. In 1955-56 rents were realized for the first time direct from the tenants and the total sum collected in the district (including cess) was Rs. 20,40,900. The amounts collected in the district by way of land revenue and cess before and after the coming into force of the Estates Acquisition Act show that the new arrangements led to a predictably large increase in land revenue collections as is evident from the following table.[2]

DEMAND AND COLLECTION OF LAND REVENUE AND CESS IN HOWRAH DISTRICT FROM 1951-52 TO 1965-66

Year	Total Demand (Rs.)	Collection (Rs.)
1951-52	9,30,170	5,65,739
1952-53	13,62,810	5,76,600
1953-54	13,07,627	7,12,037
1954-55	10,22,359	7,44,656
1955-56	25,40,300	20,40,900

[1]C. N. Banerjei—op. cit. pp. 22-5. *(contd.)*

[2]Source: District Magistrate, Howrah.

Note: The collection figures are gross figures. Previous to the starting of direct collection, the land-lords paid their revenue to the Treasury and the cost of collection was negligible. The Government now has to incur a high cost for the collecting machinery and the net increase of revenue is not very high.

DEMAND AND COLLECTION OF LAND REVENUE AND CESS IN HOWRAH DISTRICT FROM 1951-52 TO 1965-66.—*contd.*

Year			Total Demand (Rs.)	Collection (Rs.)
1956-57	..	..	31,99,957	18,53,182
1957-58	..	..	41,51,645	22,19,242
1958-59	..	..	46,89,365	21,09,718
1959-60	..	..	50,25,010	12,78,912
1960-61	..	..	64,24,944	27,80,012
1961-62	..	..	65,49,785	30,43,318
1962-63	..	..	64,69,623	39,40,958
1963-64	..	..	53,87,992	25,30,962
1964-65	..	..	50,02,695	34,37,281
1965-66	..	..	49,91,591	29,28,118

It will, however, be seen that the rise in the demands and collections of land revenue has not been steady from year to year. The fluctuations noticed from 1955-56 onwards were due to varying amounts or arrears (including interests) and cesses levied and collected in successive years.[1]

Before the Estates Acquisition Act came into effect, land revenue management was under the Khas Mahal Department which, after the introduction of the Act, was expanded into the Estates Acquisition Department with Management and Compensation as its two wings under the direct control of an Additional Collector, who is empowered to act as the Collector of the district so far as the land revenue administration of a district is concerned. The Land Reforms Act of 1956 also came into operation in different phases along with other analogous enactments and ancillary rules. To administer all these pieces of legislation the district has been divided into a number of Land Reforms Circles each of which is usually conterminous with a police station although there are exceptions to this general rule. A Land Reforms Circle is under a Junior Land Reforms Officer who is assisted by a Circle Inspector, an Amin and a number of assistants, mutation muharrirs and certificate clerks whose strength varies according to the pressure of work on the office. The J.L.R.O. is empowered to try Bhagchas cases in terms of the provisions of the Land Reforms Act and also acts as the Certificate Officer in respect of certificate cases filed in the Circle office for realization of arrears of rent and cesses. At the subdivisional level there is a Subdivisional Land Reforms Officer who is empowered to try pre-emption cases within the subdivision according to the provisions of the Land Reforms Act. He also attends to certificate cases in regard to rents and cesses. The S.L.R.O. supervises the work of the J.L.R.O.'s under

[1]Source: District Magistrate, Howrah.

him and is the subdivisional head of the Land Reforms administration subject to the general control of the Subdivisional Officer.

A Land Reforms Circle is divided into several Tahsil Blocks each consisting of two to five Mauzas, the criterion for the formation of a Block being that it should have a current demand varying between Rs. 8,000 and Rs. 12,000. Rents and cesses are collected by Tahsildars who are temporary part-time officials, working in terms of six-monthly agreements and are appointed by the Subdivisional Officers They get a fixed monthly allowance besides a *pro rata* commission on actual collections. Each of them is assisted by a part-time peon throughout the year and a part-time muharrir for four months during the collection season. The Tahsildar maintains the rent rolls, the Tenants' Ledger and other collection registers which are inspected from time to time by the Circle Inspector and the J.L.R.O. All tenants now pay their land rents to the State through the Tahsildar except in the case of *Thikajamas* and second or lower grade non-agricultural tenants (*Dakhalkars*), whose rents are not realizable by the State according to the Estates Acquisition Act.

There are 10 Land Reforms Circles in the district, 4 in the Sadar subdivision and 6 in Uluberia. A Land Reforms Officer, Grade I, is posted at the district headquarters and a Subdivisional Land Reforms Officer at Uluberia. There are 10 Junior Land Reforms Officers, 10 Circle Inspectors, 10 Amins and other assistants. Tahsil Blocks in the district number 264 and Tahsildars 241.

As regards the payment of compensation to ex-intermediaries, who number about 1,60,000 in the district, the Compensation Officers under the Collector make payments according to assessments made by the Settlement Department. Up to March, 1967, Rs. 55,39,697 was paid by way of *ad interim* and Rs. 18,42,583 (in cash) by way of final compensation, the latter excluding Rs. 87,900 paid in bonds. Following is an account[1] of the final and *ad interim* compensations paid up to 1966-67.

PAYMENT OF FINAL AND *Ad interim* COMPENSATION IN HOWRAH DISTRICT FROM 1955-56 TO 1966-67

Year	Ad interim		Final		
	Secular (Rs.)	Religious (Rs.)	Principal (Rs.)	Interest (Rs.)	Others (Annuity) (Rs.)
1955-56	45	230			
1956-57	42,459	20,538			
1957-58	2,74,999	99,992			
1958-59	6,48,234	59,784			

(contd.)

[1]Source: District Magistrate, Howrah.

PAYMENT OF FINAL AND *Ad interim* COMPENSATION IN HOWRAH DISTRICT FROM 1955-56 TO 1966-67.—*contd.*

	Ad interim		Final		
Year	Secular (Rs.)	Religious (Rs.)	Principal (Rs.)	Interest (Rs.)	Others (Annuity) (Rs.)
1959-60	6,99,100	58,185			
1960-61	5,99,999	40,891			
1961-62	8,00,000	75,000	25,739	487	—
1962-63	7,40,000	59,747	1,23,402	23,164	—
1963-64	2,20,702	43,422	3,24,002	62,148	—
1964-65	2,97,177	47,465	1,99,990	38,989	—
1965-66	3,23,202	57,322	4,42,393	85,497	—
1966-67	2,83,687	67,153	4,75,218	1,09,022	[illegible]

LAND REFORMS

The lands vested in the State under the Estates Acquisition Act consist mostly of *bhāgār* and *smasān* (burning and burial grounds), paths, beels and ex-intermediary embankments etc. which do not aggregate to any substantial area. Vested agricultural *khās* lands have so far been settled with cultivators on a year to year basis against licence fees. Options for retention of land are still being submitted by the ex-intermediaries to the Settlement camps which means delay in taking over possession of *khās* lands; litigation is adding to the delay in other cases.

Besides their main functions relating to collection of land revenues, the J.L.R.O.s are also entrusted with the task of maintaining ex-intermediaries' embankments, settlement of *Sairāti* interests and licencing of vested agricultural *khās* lands to landless cultivators. According to recent Government instructions, abatement of rent of homestead lands has been allowed in about 8,000 cases in the district. In 1959-60 a general remission of rent was allowed in the areas affected by floods. Similar remissions are also allowed in the drought affected areas. The hereditary boatmen and fishermen get a priority in the leasing out of ferries and fisheries. Illegal eviction of *bargādārs* (share-croppers) is sought to be prevented. Realization of outstanding arrears for more than three years is done by filing certificate cases under the Public Demands Recovery Act. A large number of ex-intermediary embankments in the district were reported to have been repaired after the floods of 1959-60 as a result of which many spill areas began to yield good crops where none grew before.[1]

As for rural wages and condition of agricultural labour, the District Magistrate reported that the working hours of the latter were

[1] Source: District Magistrate, Howrah.

from 8 in the morning to 12 noon and again from 2 p.m. to 5 p.m. during the agricultural season. A reduction in daily wages is made if the employer supplies the midday meal. The average income of a farm hand ranges between Rs. 3.50 and Rs. 4 per day plus tiffin. In off seasons, agricultural labourers are engaged in other manual work on similar daily wages.

OTHER SOURCES OF REVENUE

Excise

In the 19th century the administration of excise revenue was in the hands of the Abkaree Department. "The Abkaree Department", observed C. N. Banerjei, "which has control of all revenue arising from the sale of spirituous liquors and drugs, has all along been managed by the Collector of Calcutta, who is also Superintendent of Abkaree, here, owing to Howrah falling within the radius of twenty miles from Calcutta. During the last ten years liquor shops under the Abkaree Department have greatly increased, and the effects of the drink are fearful to contemplate."[1] In 1909 when the old Gazetteer of Howrah district was written, the average annual earning from excise revenue, excluding the towns of Howrah and Baly (which fell under the jurisdiction of Calcutta for the purpose of excise administration) was Rs. 3,165 per 10,000 of the population as compared with the then Provincial average of Rs. 3,206 for an equivalent number of people.[2] The Gazetteer mentioned that "the greater portion of the Excise revenue is derived from the sale of country spirit . . . the manufacture and sale of which were carried on under both the out-still system and the central distillery system until 1907, when the target supply system was introduced, *i.e.*, the local manufacture of country spirit has been prohibited, and a target for the whole-sale supply of spirit has been given out to a firm of distilleries. The contractors are forbidden to hold any retail licence for its sale, but are allowed the use of distillery and warehouse buildings for the storage of liquor. The right of retail vendor is disposed of by separate shops, each of which is put up to auction; and the retail vendors are forbidden to sell liquor except at the prescribed strength, for which maximum prices are fixed. ...

"The receipts from opium and hemp drugs account for practically all the remainder of the Excise revenue. The greater portion is derived from the duty and licence fees on opium; . . The use of *ganja, i.e.*, the dried flower tops of the cultivated female hemp plant and the resinous exudation on it, appears to be greater than in any district of the Division except Hooghly, ..."[3]

As for the present, the Superintendent of Excise, Howrah reports that the administration of excise revenue is organized on the follow-

[1] C. N. Banerjei—op. cit. p. 40.
[2] L. S. S. O'Malley and M. Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 129.
[3] ibid. pp. 129-30.

ing lines: (1) country spirit, *gānjā*, opium and *bhāṅg*—the revenues on these items are derived from the duty and licence fees on intoxicants taken delivery of by the vendors from the warehouses and the Treasury and Sub-Treasuries (in case of opium); (2) *tāri*—the revenue is derived from licence fees and 'tree-tax' on a basis fixed by settlement on auction; (3) *pachwāi*—the licence fees are calculated on the basis of the quantity of dried rice used in the manufacture of *pachwāi*; (4) foreign liquor—the licence fees are calculated on the quantity of liquor sold and in the case of clubs (two in the district of Howrah) a lump sum is paid in advance at the beginning of the financial year; and (5) minor licences—annual licence fees of Rs. 5 or Rs. 10, as the case may be, are paid by the licence-holders at the time of the renewal of their licences each year. The following table[1] gives the excise incomes and corresponding collection expenses in the district excluding the municipal areas of Howrah and Baly which fall under the jurisdiction of the Collector of Calcutta.

EXCISE INCOME AND COLLECTION CHARGES IN HOWRAH DISTRICT FROM 1956-57 TO 1966-67

Year	Income		Collection charges
	Tāri	General	
1956-57	1,14,200	8,22,964	1,75,945
1957-58	1,26,462	7,98,216	1,77,350
1958-59	1,06,793	6,84,563	1,78,290
1959-60	1,07,426	6,47,231	1,79,125
1960-61	1,06,299	6,33,837	1,79,675
1961-62	1,30,347	7,40,556	1,80,175
1962-63	1,60,642	8,84,421	1,80,985
1963-64	1,70,356	11,03,119	1,81,475
1964-65	1,75,758	14,17,974	1,82,595
1965-66	1,75,841	15,62,412	1,87,490
1966-67	1,56,903	13,98,677	1,87,584

As regards the municipal towns of Howrah and Baly, the year-wise break-up of total excise collections and corresponding expenses for the period from 1956-57 to 1966-67 are shown in the following table.[2]

[1] Source: Superintendent of Excise, Howrah.
[2] Source: Collector of Excise, Calcutta.

TOTAL EXCISE COLLECTIONS AND EXPENDITURE FOR THE TOWNS OF HOWRAH AND BALY

Year	Total Collections (Rs.)	Collection Expenses (Rs.)
1956-57	21,06,656	77,735
1957-58	21,67,149	78,677
1958-59	20,64,323	93,488
1959-60	22,61,938	86,634
1960-61	22,67,181	98,575
1961-62	20,90,119	1,02,299
1962-63	27,16,073	1,02,346
1963-64	33,17,531	1,28,201
1964-65	42,41,974	1,25,807
1965-66	47,04,099	1,38,613
1966-67	47,51,876	1,47,941

Agricultural Income-Tax

Under the Bengal Agricultural Income-Tax of 1944 (which is in force in West Bengal with suitable adaptations), the number of assessees and collections in the Howrah district from 1956-57 to 1966-67 were as follows.[1]

NO. OF ASSESSEES, AND COLLECTIONS OF AGRICULTURAL INCOME-TAX IN HOWRAH DISTRICT

Year	No. of Assessees	Collection (Rs.)
1956-57	225	38,482
1957-58	246	16,608
1958-59	262	23,140
1959-60	261	9,735
1960-61	275	17,657
1961-62	276	30,655
1962-63	311	29,989
1963-64	338	23,957
1964-65	351	11,098
1965-66	351	17,186
1966-67	313	28,494

[1] Source: Commissioner of Agricultural Income-Tax, West Bengal, who pointed out that since the Agricultural Income-Tax Range Offices consisted of several districts taken together, collection expenses could not be accounted for in regard to individual district.

Commercial Taxes

Taxation on the sale of certain commodities was introduced in Bengal in July 1941 under the Bengal Financial (Sales) Tax Act of that year which is in force in West Bengal with suitable adaptations. The West Bengal Sales Tax Act of 1954 has imposed besides a tax on the sale of cigarettes. The number of assessees and the total annual collections under these two Acts from 1956-57 to 1966-67 are shown in the following statement.[1] It was explained by the Commissioner of Commercial Taxes, West Bengal, that it was not possible to furnish the figures for the yearwise amount of demand under the various heads of Commercial Taxes since all these taxes were payable in monthly, quarterly or annual instalments; the various categories of dealers were, again, assessed at irregular intervals of time, some after a year, some after two years and some even after three years. As such, there could be no comparable base for the demands for different years.

NO. OF ASSESSEES AND TOTAL COLLECTIONS UNDER THE B.F.S.T. AND W.B.S.T. ACTS IN HOWRAH DISTRICT

Year	No. of assessees under the B.F.S.T. Act	Total collection under the B.F.S.T. Act (Rs.)	No. of assessees under the W.B.S.T. Act	Total collection under the W.B.S.T. Act (Rs.)
1956-57	1,092	13,68,578	6	8,529
1957-58	1,178	14,94,111	9	9,395
1958-59	1,230	17,34,571	9	15,768
1959-60	1,281	18,86,783	10	19,339
1960-61	1,397	21,85,083	10	20,612
1961-62	1,512	25,76,084	10	14,669
1962-63	1,605	30,84,539	11	9,838
1963-64	1,730	38,55,704	42	1,49,175
1964-65	1,957	46,69,657	51	2,67,483
1965-66	2,242	50,89,212	64	2,85,660
1966-67	2,432	51,17,288	73	4,72,675

The Bengal Motor Spirit Sales Taxation Act of 1941 (in force in West Bengal with adaptations) provides for a levy on retail sales of motor spirits to further the construction of new roads in the State. The number of assessees and the total collections under this Act for the last 11 years were as follows.[2]

[1] Source: Commissioner of Commercial Taxes, West Bengal.
[2] Source: As before.

NO. OF ASSESSEES AND TOTAL COLLECTIONS UNDER THE B.M.S.S.T. ACT IN HOWRAH DISTRICT

Year	No. of assessees	Total Collection (Rs.)
1956-57	42	9,72,530
1957-58	51	9,70,919
1958-59	55	10,90,449
1959-60	59	11,31,280
1960-61	60	12,27,239
1961-62	65	12,08,365
1962-63	67	13,20,674
1963-64	73	12,96,182
1964-65	76	11,63,627
1965-66	82	14,45,381
1966-67	95	20,53,118

The Central Sales Tax Act of 1956 provides for taxes on sale of certain goods in the course of inter-State trade and authorizes each State Government to collect, as the agent of the Government of India, the proceeds (reduced by the cost of collections), except in so far as they represent revenues attributable to Union territories, and retain them. The number of assessees and the amounts collected in the district since the inception of the Act were as follows.[1]

NO. OF ASSESSEES AND TOTAL COLLECTIONS UNDER THE C.S.T. ACT IN HOWRAH DISTRICT

Year	No. of assessees	Total collection (Rs.)
1957-58	401	3,12,636
1958-59	458	9,49,367
1959-60	528	7,55,832
1960-61	602	9,28,933
1961-62	680	10,04,038
1962-63	767	14,62,115
1963-64	843	28,76,719
1964-65	994	36,43,705
1965-66	1,145	31,03,634
1966-67	1,259	27,93,793

The gross earnings and collection expenses of the Commercial Tax Department in respect of Howrah district over the last 11 years are shown in the following statement.[2]

[1-2] Source: As before.

GROSS EARNINGS AND COLLECTION EXPENSES OF THE COMMERCIAL TAX DEPARTMENT FOR THE DISTRICT OF HOWRAH

Year	Gross Earnings (Rs.)	Collection Expenses (Rs.)
1956-57	23,49,637	—
1957-58	27,87,025	31,822
1958-59	30,90,155	29,862
1959-60	37,93,234	29,395
1960-61	43,61,867	24,593
1961-62	48,03,156	—
1962-63	58,75,166	68,526
1963-64	81,78,440	65,789
1964-65	97,44,472	75,753
1965-66	99,23,887	86,540
1966-67	1,04,36,869	1,05,418

Income-Tax

The number of assessees, total demands and collections of income-tax as also collection charges for the district of Howrah for the last 11 years are shown in the following table. The Commissioner of Income-Tax, West Bengal, however, expressed his inability to furnish figures for collection expenses for the financial years 1956-57 and 1957-58.[1]

NO. OF ASSESSEES, TOTAL INCOME-TAX DEMANDS, COLLECTIONS AND EXPENDITURE IN HOWRAH DISTRICT

Year	No. of assessees	Total demand (Rs.)	Total collection (Rs.)	Total expenditure (Rs.)
1956-57	4,110	48,76,000	15,10,000	—
1957-58	4,305	69,85,000	16,56,000	—
1958-59	4,565	72,05,000	18,03,000	1,15,000
1959-60	4,656	72,75,000	20,55,000	1,27,000
1960-61	4,795	73,85,000	25,65,000	1,34,000
1961-62	4,797	74,13,000	28,85,000	1,37,000
1962-63	4,702	73,86,000	27,95,000	1,42,000
1963-64	4,803	76,28,000	52,15,000	1,69,000
1964-65	5,933	99,36,000	64,34,000	1,68,000
1965-66	5,892	76,28,000	47,44,000	2,00,000
1966-67	5,733	94,63,000	52,71,000	2,33,000

[1] Source: Commissioner of Income-Tax, West Bengal.

CHAPTER XI

LAW ORDER AND JUSTICE

The city of Howrah has a highly industrialized surrounding. In it is located the terminus of the railways serving northern and southern India. It stands on the river Bhagirathi (Hooghly) with a brick river traffic opposite Calcutta the only port of Northern India. These factors make the city an attractive place for criminals and the city has always been a convenient centre of criminal activity. O'Malley and Chakravarty[1] note that gangs of Pasis from Uttar Pradesh specializing in burglary and theft and gangs of Banpars from Patna and Monghyr committing river piracy had settled down on the outskirts of this city. The Banpars often perpetrated their crimes garbled as Port police. A band of cheats often stole licence tokens from registered carts and affixing these stolen tokens to their own carts deceived merchants. Activities of Criminal gangs at the present day, though very much reduced, have not disappeared altogether. The *Kāṅgāli* gang roamed about ostensibly as beggars but sparing no opportunity of lifting the baggages of careless passengers and snatching away ornaments from women who could be caught unawares. Occasional robberies in the town also go to their credit. Quite a number of them had to be confined under the Preventive Detention Act.[2]

Recent figures of the incidence of crimes in the Howrah district tend to show that this gang character of crimes is gradually giving place to individual crimes as the following table of commission of crimes for 1961 to 1966 would show.

INCIDENCE OF CRIME IN HOWRAH DISTRICT: 1961-66

	1961	1962	1963	1964	1965	1966
Dacoity	10	30	25	12	16	15
Burglary	316	623	975	621	404	336
Theft (excluding cattle theft)	1,209	1,447	1,638	1,557	1,518	1,497
Cattle theft	23	36	25	25	14	24
Murder	23	16	24	20	21	19
Sex crimes	30	30	44	41	30	45
Enforcement crimes	753	720	751	645	1,548	942

[1] Howrah District Gazetteer, 1909.
[2] Source: Superintendent of Police, Howrah.

It should be noted that the different types of crimes included in the preceding statement vary in their intrinsic gravity. A dacoity or a murder, for instance, can never be equated to a cattle theft. Therefore, for a proper assessment of the incidence of crime in the district, the district and State figures for each category of crime have to be taken together to arrive at a rational comparison between the two. The following table[1] has, accordingly, been prepared on the basis of average occurrences of each type of comparable crime in one year in the whole of West Bengal (excluding Calcutta) and in Howrah district. The table also gives percentages of each type to the total number of offences committed during the same period and over the same area.

WEST BENGAL VIS-A-VIS HOWRAH DISTRICT CRIME FIGURES: 1961-66

Type of crime	West Bengal		Howrah	
	Average per year	Percentage	Average per year	Percentage
Dacoity	597.5	1.8	18.0	0.8
Burglary	10,248.9	31.0	545.8	25.7
Theft (excluding cattle theft)	19,527.5	59.0	1,477.7	69.6
Cattle theft	790.8	2.4	24.5	1.2
Murder	452.5	1.4	20.5	1.0
Sex crimes	1,453.8	4.4	36.7	1.7

While the percentages of dacoity, burglary, cattle theft, murder and sex crimes committed in Howrah district during the period from 1961 to 1966 were less than those for the whole State, the relative incidence of theft (excluding cattle theft) was much higher in the district. While 59.0 per cent of the crimes included in the preceding table and committed in West Bengal during 1961-66 were thefts, the corresponding percentage for Howrah was 10.6 points higher. But in dacoity, it was 1.0 per cent below the State average; so was it in burglary by 5.3 per cent, in cattle theft by 1.2 per cent, in murder by 0.4 per cent and in sex crimes by 2.7 per cent. For an area containing a large number of industrial slums and a dense concentration of floating labour population, it is somewhat striking that burglary, murder and sex crimes were below the State averages. It is not surprising that the figures for dacoity and cattle theft were less than the State percentages since dacoity as an organized crime thrives on poor communications and lack of speed in police action. Cattle theft is also a crime peculiar to predominantly rural

[1] Source: Deputy Inspector General of Police (Criminal Investigation Department), West Bengal and Superintendent of Police, Howrah.

areas and was, therefore, not expected to show a high incidence in an industrialized district like Howrah.

Thanawise incidence of crime

The following table[1] giving thanawise crime figures for the period 1961-66 would tend to locate the crime concentration zones in the district.

THANAWISE CRIME FIGURES FOR HOWRAH DISTRICT: 1961-66

Thana	Dacoity	Burglary	Theft	Cattle theft	Murder	Sex crimes	Enforcement crimes
Baly	11	560	1,377	12	14	32	931
Howrah	—	352	1,290	2	9	10	780
Bantra	—	139	557	7	3	4	361
Malipanchghara	1	136	574	9	3	21	458
Golabari	—	170	1,184	13	8	12	646
Sibpur	1	334	971	12	8	23	653
Jagachha	2	113	326	3	6	6	213
Sankrail	4	155	305	9	7	15	199
Panchla	3	82	126	3	5	6	94
Jagatballavpur	5	161	208	4	9	17	164
Domjur	5	169	278	5	7	10	161
Uluberia	19	212	491	20	12	11	203
Bauria	2	21	77	2	5	2	129
Syampur	8	238	286	12	12	12	106
Bagnan	10	197	392	13	6	17	117
Amta	25	181	329	15	7	15	125
Uday Narayanpur	12	55	105	6	3	7	49

It is seen that dacoity, an organized crime, is more frequent in outlying areas like Amta, Uluberia, Uday Narayanpur and Baly (the western parts of which thana are largely rural), while urban police stations like Bantra, Golabari, Sibpur, Malipanchghara, Jagachha, Sankrail and Bauria are relatively free from it. In burglary, on the other hand, Baly has the highest incidence followed by Howrah, Sibpur and Syampur. In theft, Baly again shows the highest concentration followed by Howrah, Golabari and Sibpur. In cattle theft, Uluberia, Amta, Bagnan and Syampur—all rural areas—take the lead while, peculiarly, the urban thanas of Golabari and Sibpur come up as strong rivals. This is explained by the fact numerous

[1] Source: Superintendent of Police, Howrah.

milkmen keep milch-cattle in urban areas also. In murder and sex crimes, Baly again tops the list, followed in respect of the former by Uluberia, Syampur, Jagatballavpur, Sibpur and Golabari, and in respect of the latter, by Sibpur, Jagatballavpur, Amta and Sankrail. In enforcement crimes, the urban police stations of Baly, Howrah, Sibpur and Golabari occupy the top places, in that order. On an overall assessment, Baly occupies the most important place in the crime map of the district with the highest incidence of burglary, theft, murder, sex offences and enforcement crimes. The next crime concentration area is Sibpur followed by Golabari and Howrah. All these thanas form part of a highly industrialized area.

Enforcement crimes

With an increasing involvement of the State in the production, transportation and distribution of foodstuff and other essential commodities, certain new laws, namely the Essential Commodities Act of 1957, the West Bengal Rationing Order of 1964, the Calcutta Industrial (Extended) Area Regulation of 1964 etc. had to be promulgated to control the production and distribution of commodities covered by them. Infringement of these statutes constitutes a new type of crime which is, of late, very much on the increase in view of the prevailing scarcities.

Excise offences

There is another sphere where crimes are becoming more and more socially significant. Violation of the provisions of the Bengal Excise Act, 1909 not only reduces State revenues, but also offends against certain norms of social behaviour. The ancillary crimes of illicit distillation and sale and offences committed in a drunken state are also to be reckoned with. The table[1] below shows the magnitude of excise offences in the district between 1961 and 1966.

INCIDENCE OF EXCISE OFFENCES IN HOWRAH DISTRICT: 1961-66

Year	Cases apprehended	Cases convicted
1961	1,612	1,253
1962	1,990	1,501
1963	2,674	2,106
1964	2,784	2,090
1965	2,702	1,836
1966	2,758	1,778
Total	14,520	10,564

Over these years, the upward trend in apprehension is apparent. Out of a total of 14,520 cases apprehended, 10,564 ended in convictions which indicates fairly satisfactory excise vigilance, the

[1] Source: Collector of Excise, Calcutta and Superintendent of Excise, Howrah.

apprehension-conviction ratio standing at 72.75 per cent. The following thanawise figures[1] covering a period of six years from 1961 to 1966 would help locate the areas showing a high incidence of excise offences.

THANAWISE INCIDENCE OF EXCISE OFFENCES IN HOWRAH DISTRICT: 1961-66

Thana	Cases apprehended	Cases convicted
Baly (excluding municipal areas)	142	97
Jagachha	743	455
Sankrail	952	662
Panchla	500	333
Jagatballavpur	274	207
Domjur	861	594
Bauria	715	340
Uluberia	678	289
Syampur	342	173
Bagnan	715	340
Amta	391	301
Uday Narayanpur	253	182
Baly municipal area	647	504
Howrah	2,750	2,468
Bantra	255	231
Malipanchghara	452	390
Golabari	2,824	2,036
Sibpur	1,026	962

It is apparent that Golabari and Howrah are run-away leaders in excise offences followed by Sibpur. The apprehension-conviction ratio of 93.76 per cent was highest at Sibpur, followed by Bantra with 90.58, Howrah with 89.74 and Malipanchghara with 86.28 per cent. The Golabari area which recorded the highest crime concentration came lower on this list with 72.09 per cent while the lowest ratio was registered in Uluberia with only 42.62 per cent.

The number of excise and opium licencees in the district of Howrah (including the municipalities of Howrah and Baly) as in April 1967 is given in the following table.[2]

[1] Source: Collector of Excise, Calcutta and Superintendent of Excise, Howrah.
[2] Source: Commissioner of Excise, West Bengal.

EXCISE LICENCEES IN HOWRAH DISTRICT: 1966

Country spirit	48
Gānjā	46
Bhāṅg	42
Foreign liquor	11
Pachwāi	2
Opium	41
Tāri	59
Total	249

The quantities of intoxicants sold from these 249 shops during 1964-65 and 1965-66 (as shown in the following table) will throw light on the consumption of intoxicants in the district.[1]

CONSUMPTION OF INTOXICANTS IN HOWRAH DISTRICT: 1964-66

Name of Intoxicant	1964-65 Quantity sold	1964-65 Approximate value (in Rs.)	1965-66 Quantity sold	1965-66 Approximate value (in Rs.)
Country spirit	3,25,703 L.P. litres	44,81,673	3,66,374 L.P. litres	50,41,306
Pachwāi	6.78 quintals (in terms of dry rice)	1,831	9.72 quintals (in terms of dry rice)	2,624
Opium	228¼ kg.	2,28,500	219 kg.	2,19,000
Gānjā	2,760 kg.	6,07,200	1,588 kg.	3,49,360
Bhāṅg	659 kg.	65,900	669 kg.	66,900
Foreign liquor (including beer)	60,932 litres	—	65,931 litres	—

The quantity of illicit distillation and fermented wash seized during excise raids is given in the following table.[2]

ILLICIT DISTILLATION IN HOWRAH DISTRICT: 1964-66

	1964-65 Quantity seized (in litres)	1964-65 Approx. Value (in Rs.)	1965-66 Quantity seized (in litres)	1965-66 Approx. Value (in Rs.)
Illicit distilled liquor	19,662	1,96,620	4,926	49,260
Fermented wash	1,89,303	1,90,000	1,48,781	1,50,000

It should be noted that the quantities detected can at best be a fraction of the total quantity that must have passed into consumption. And that is a pointer to the enormity of this clandestine trade. The manufacturing zones being mainly concentrated in the Golabari,

[1-2] Source: Commissioner of Excise, West Bengal (value of foreign liquor is not available with him).

Howrah and Sibpur thanas, which are well served by road and rail communications, it is conceivable that the consumption area covers neighbouring areas including metropolitan Calcutta.

Railway offences

Howrah being a terminus station of the Eastern and South Eastern Railways and one of the most important railway centres in India, it is only natural that incidence of offences under the Indian Railways Act will be heavy here. There exist a stationary railway court at Howrah station and a mobile court of a special railway magistrate with jurisdiction over railway premises in 6 districts, viz. Howrah, Hooghly, Burdwan, Birbhum, Nadia and Murshidabad, to try those cases. The nature of offences brought before these courts are generally travelling without tickets, unauthorized entry into railway premises or committing nuisance there, attempts to defraud the Railways etc A total of 32,122 cases was disposed of by the stationary magistrate and 5,012 by the mobile magistrate in 1962-63. Only 12 cases before the former and 2 before the latter ended in acquittals, the rest ending in convictions.[1]

Juvenile delinquency

Howrah is one of the two districts in West Bengal having a special court for trial of juvenile offenders. During the 5-year period from 1962 to 1966, 10,162 cases were brought before this court of which 435 were under the Indian Penal Code, 119 under the Excise Act, 774 under the Essential Commodities Act, 552 under the Port Rules and 8,282 were petty offences. Of the 16,728 children connected with these cases, 15,903 were warned and discharged, 146 were acquitted, 183 were released on good behaviour bond, 382 were sent to reformatory or borstal schools and 114 either died or escaped or their cases were transferred to other courts.

Prosecutions and convictions

Under the Rule of Law to which the Indian judicial system is wedded, no person can be deemed to have committed an offence unless so found by due process of law. The following table[2] gives figures, over a period of 5 years from 1961 to 1965, of cases lodged with the district police, those prosecuted by them after investigation and those ending in convictions.

PROSECUTIONS AND CONVICTIONS IN HOWRAH DISTRICT: 1961-65

Year	Cases lodged with police	Cases prosecuted by police	Cases convicted by Courts
1961	2,839	1,453	878
1962	3,365	1,600	894
1963	4,029	1,648	971
1964	3,729	1,591	735
1965	5,345	3,425	2,321

[1] Source: Special Railway Magistrate and Railway Magistrate, Howrah.
[2] Source: Superintendent of Police, Howrah.

The foregoing yearly figures always include a small spill-over from the previous year. During this period of 5 years, the average number of cases lodged with the district police per year stood at 3,861.4. Similarly, the average number of cases prosecuted by the police every year was 1,907.4 and that of cases convicted by the courts was 1,159.8. It is also noticed that 47.39% of the cases lodged with the police are actually found fit for prosecution and that only 30.03% of the initial complaints end up in convictions. No more than 60.8% of the cases prosecuted end in conviction in the courts. In 1961, 60.42% of the cases prosecuted by them resulted in convictions while in 1965 the corresponding figure was 71.52%.

Industrial unrest

Industrial unrest has been elaborately dealt with in the chapter on Industries but a brief reference to this issue may be made here as it is closely connected with problems of law and order. There are as many as 172 registered trade unions belonging to different industries and to different political faiths functioning in the district, the membership of which vary from 60,673 in the Eastern Railwaymen's Congress to 10 in the Jugeasalt Rand (India) Private Ltd. Employees' Union [1] The following table will indicate the magnitude of industrial unrest in the district over a period of five years from 1962 to 1966.[2]

INDUSTRIAL UNREST IN HOWRAH DISTRICT: 1962-66

Year	No. of occasions	Men involved	Man-days lost
1962	48	10,814	2,08,025
1963	42	22,680	1,50,486
1964	24	8,309	1,05,802
1965	40	12,391	1,47,518
1966	22	22,640	3,84,127
Total:	176	76,834	9,95,958

A study of the last column will show a gradual fall in man-days lost from 1962 to 1964 and steep rise during the two subsequent years.

ORGANIZATION OF POLICE FORCES

History

A regular police force solely responsible for prevention of crimes and detection of criminals did not materialize for many years after the inception of British rule in India. Founded on Quranic law, the erstwhile Mughal government continued the Islamic practice of policing through the *muhtasibs* whose duty was to prevent breaches of the law and to act as censors of morals. Later "the institution of mir 'adl, the establishment of regulations under Akbar and the formation of a code of judicial decrees under Aurangzeb, all tended

[1-2] Source: Labour Commissioner & Registrar of Trade Unions, West Bengal.

to reduce the areas of discretion exerciseable through the ecclesiastical office of qazi."[1] *Muhtasibs* were again somewhat restricted in their authority and most of their powers were delegated to the *kôtwāls,* a secular functionary responsible for maintaining peace in cities and towns only. The general preservation of law and order was a responsibility of the *faujdārs* who represented the executive authority of the government within the limits of their *sarkārs*. The police administration of the Mughals was essentially of a military character and depended on contingents of sepoys whose strength varied from 500 to 1,500.[2] Further down the hierarchy *thānādārs* were appointed for the thanas under the control of local *shikdārs,* who were subordinate to the *faujdārs*. The *thānādārs* were assisted by a small number of *barqāndāzes* or armed guards.

Even from before the *muhtasibs* there existed an earlier Hindu institution of village watchmen who guarded the person and property of the people of a community and were granted in return service lands or a share of the produce in lieu of wages.[3] The duties of these watchmen were exclusively confined to the apprehension of offenders and prevention of breaches of the peace. From the rent roll of Todar Mal, the Howrah district appears to have been distributed among three *sarkārs*, Satgaon, Sulaimanabad and Mandaran.[4] But from other records it appears that the *faujdārs* stationed at Hooghly and Burdwan had their jurisdiction over certain parts of the district, if not the whole. From the account left by Seid-Gholam-Hossain-Khan in his famous 'The Sier Mutaqherin', it is found that among the places where *faujdārs* were posted were Bardvan (Burdwan), Midnipoor (Midnapur) and Bacshy-bender-hooghly (Hooghly).[5] This system probably worked well so long as the central administrative machinery was strong and effective. Both the zemindari and faujdari police worked side by side and in the exercise of police duties the zemindars appear to have been subordinate to the *faujdārs* who were in charge of pergunnahs comprising many zemindaris.[6] With the decline of the Mughal Empire the zemindars became more powerful and by 1773 they "too frequently protected the criminals" as the Nawab's police force was, by then, reduced to complete impotence.

"When Hastings was put in charge, the country was practically in a state of chaos and confusion."[7] In 1774 he proposed that *faujdārs*

[1] B. B. Misra—The Central Administration of the East India Company (1773-1834). Manchester, 1959. p. 302.

[2] ibid. p. 303.

[3] D. J. McNeille—Report on the Village Watch of the Lower Provinces of Bengal. Calcutta, 1866. p. 5.

[4] L. S. S. O'Malley and Monmohan Chakravarti—op. cit. p. 18.

[5] Seid-Gholam-Hossein-Khan—The Seir Mutaqherin (Vol. III). Calcutta, 1902. pp. 178-79.

[6] G. W. Farrest—Selections from the Letters, Despatches and other State papers, preserved in the Foreign Department of the Government of India, 1772-85 (Vol. II). Calcutta, 1890. p. 454.

[7] T. K. Banerjee—Background of Indian Criminal Law. Calcutta, 1963. p. 186.

should be appointed at certain stations which included Houghley, Calcutta and Thannah Muewa "for the protection of the inhabitants, for the detection and apprehension of public robbers within their respective districts and for transmitting constant intelligence in all matters relating to the peace of the country to the Presidency."[1] In 1776 Reza Khan's plan for a better police administration was adopted providing for a faujdari thana at the principal town of each large district in addition to *chowkis* or inferior police stations in the outlying areas. Under the new plan, 4 thanas and 3 *chowkis* were set up in Calcutta and its dependencies Hooghly, Burdwan and Midnapur.[2] By 1781-82, it was realized that co-operation between the *faujdārs* and *thānādārs* was not all that was desired and finally the faujdari establishments were annulled except in certain very important places.

With the acquisition of diwani by the East India Company in 1765, the administration was divided between two departments, *huzuri* and *nizāmat*. "The former had cognizance of civil and criminal matters, and the latter had a fiscal jurisdiction attached to it, being chiefly responsible for the collection of Government revenues."[3] After four years a change of system was found necessary and the office of the Supervisor of Revenue was created in 1769. Verelst was the first Supervisor of Burdwan and Howrah with control over both the *huzuri* and *nizāmat* departments. But still "injustice and extortion on the part of the public officers were rampant, the Court of Directors therefore resolved to introduce reforms. They determined to stand forth as Dewan, and by the agency of the Company's servants to take upon themselves the entire care and management of the revenues. Consequently, in 1772 A.D. the office of Naib Diwan was abolished and a Provincial Council of four members with the Governor at its head was organized. ... The Judicial Department had two Courts in each Collectorship, one for the despatch of civil business called Dewanny Adawlut and the other called Fouzdary Adawlut for the trial of crimes. Over these Civil courts, the Collectors presided as Judges, their proceedings being revised by the Dewanny Adawlut established at the chief seat of Government. Mr. S. Davis was the first officer under this regime at Burdwan and consequently at Howrah, which was then merged in Burdwan. But Mr. Hastings, the President of the Provincial Council, was peculiarly entrusted with the duty of administering criminal justice. ... Bengal was then divided into fourteen districts, Howrah falling within Calcutta. ... In 1781 A.D. the Provincial Councils in the Mofussil were abolished, and their Presidents converted into Collector, and Mr. Davis became again Collector of Burdwan and Howrah."[4]

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[1] ibid. p. 188.
[2] ibid. p. 190.
[3] C. N. Banerjei—op. cit. p. 26.
[4] idid. p. 26-27.

In December, 1792, a regulation was proclaimed by which the police were exclusively placed under government officers specially appointed for the purpose. The zemindars were prohibited from maintaining such establishments. The Magistrates were directed to divide their districts into police units with areas not exceeding 20 square miles and place each of them under a *Dārogā* who was to be on the government pay roll. Village watchmen like *pāikes, chowkidārs, pasbans* and *dushadhs* worked under the *Dārogās*. But strangely enough, the authority to appoint and remove such employees was left with the zemindars.[1] "In 1793 A.D. the Collectors were divested of all judicial powers and magisterial authority, which were placed in the hands of Judges. Courts of Circuit were established and Howrah was included along with Burdwan in the Calcutta Circuit."[2] But the position was soon reversed and "in 1821, the Collector held also the joint office of Magistrate, and in 1825 he combined these offices with that of Judge. In 1833, the Provincial Courts were abolished."[3]

According to Frederick John Shore, a contemporary District and Sessions Judge, an average police station in 1837 had a *Dārogā*, a Writer, a *Jamādār* and about twelve *Barqandāzes*.[4] In 1838 a committee appointed for reorganizing the police forces in Bengal pointed out that there should be a separate police force in each district under a Superintendent and an Assistant Superintendent. In 1860 another commission appointed with the same task recommended that the police units in the districts should form a unified force under an Inspector-General of Police and in each district there should be a 'European' Superintendent of Police departmentally subordinate to the Inspector-General but locally placed under the Magistrate of the district.

By 1841 Howrah had risen to such importance that a proposal was mooted for the appointment of a Joint Magistrate exclusively for "Howrah, Sulkea and Seebpore". "Hitherto the Magistrate of 24-pergunnahs used to come over once a week. All criminal cases were, however, adjudicated at Alipore. It took two years ere the proposal was matured. Meanwhile, two European Sergeants were appointed to look after the public safety. The Government, in the early part of 1843, determined to appoint a Magistrate to the station in lieu of a Joint-Magistrate with a salary of Rs. 900 a month only. The new jurisdiction thus formed, comprised the thannahs of Sulkea in 24-Pergunnahs and Ampta, Rajapore, Ooloobeariah, Khotra and Bagnan in Hooghly, but the civil and fiscal jurisdictions remained as heretofore attached to Hooghly. ...

"Although the police in Howrah up to 1843 was subordinate to

[1] T. K. Banerjee—op. cit. p. 195.
[2] C. N. Banerjei—op. cit. p. 27.
[3] loc. cit.
[4] F. J. Shore—Notes on Indian Affairs (1837), Vol. II. pp. 378-95.

that of Hooghly and subsequently of the 24-Pergunnahs yet the control of the town police was not transferred till 1861 to the Calcutta Commission of Police. Such villages as were beyond a distance of about three miles from the town did not, however, pass over to the control of that officer. In 1863 the whole of the police of Howrah was made over to the District Superintendent under the new Police Act, then recently passed. ... The Police thannahs now attached to Howrah are Howrah, Seebpore, Golabaree, Bali, Doomjore, Jugguthbullubpore, Ampta, Shampore, Sankral, Oolooberiah and Bagnan. ... The total costs of the police and other Government officials were recently estimated at Rs. 1,27,576 a month."[1]

The structure of the police organization for the district as codified under Act V of 1861 remains substantially the same today.[2]

Present police set-up

At present the district police force consists of a Superintendent, an Additional Superintendent, 3 Deputy Superintendents and an Assistant Superintendent of police besides a Subdivisional Police Officer, 17 Inspectors, 92 Sub-Inspectors, 1 Sergeant, 80 Assistant Sub-Inspectors, and 332 constables. The Subdivisional Police Officer is posted at Uluberia while 4 of the Inspectors are stationed in the 4 Circles within the Sadar subdivision and another in Uluberia Circle which covers the whole of that subdivision. Other Inspectors of Police function as the Officer-in-charge of Howrah Police Station, Reserve Inspector, Reserve Office Inspector, Court Inspector, Traffic Inspector, Home Guard Inspector, Cordoning Inspector while three of them serve in the District Intelligence Branch and two in the District Enforcement Branch. The 4 Circles within the Sadar Subdivision besides the Howrah police station which constitutes a Circle by itself, are: circle 'A' consisting of Sibpur and Sankrail thanas; circle 'B' comprising Bantra and Golabari thanas; circle 'C' made up of Malipanchghara and Baly police stations and the Lilua investigating centre, and circle 'D' with Domjur, Jagatballavpur, Jagachha and Panchla police stations. There are 18 Town Outposts attached to different police stations in the district. The Howrah police station has two of them—Howrah and Tikiapara; the Bantra P.S. has two—Bantra and Khurut; Sibpur P.S. has six—Sibpur, Amtala, Chakraberia, Bataitala, Chatterjeehat and Buxarah; Golabari P.S. has two—Golabari and Tandelbagan; Malipanchghara P.S. has three—Malipanchghara, Bamangachhi and Bandaghat; Baly P.S. has two- Baly and Belur and Uluberia has one at Uluberia.

A point that needs clarification here is the difference between an Investigating Centre and a full-scale police station. Thirteen villages (bearing J.L. Nos. 1 to 13), which form part of the Baly police station, constitute what is officially known as the Lilua Investigating Centre. The usual records and registers of a police station are maintained at

[1] C. N. Banerjei—op. cit. pp. 28-34.
[2] T. K. Banerjee—op. cit. p. 220.

the Lilua I.C. For all practical purposes it is a *de facto* police station working as a sort of a branch office of the Baly police station. Cases entered here are later given a serial number in the Baly police station. Lilua I.C. is under the Inspector of Baly Circle.[1]

The strength of police personnel (Sub-Inspectors, Assistant Sub-Inspectors and Constables) attached to the various thanas and departmental branches of the district police organization is shown in the following table.[2]

Police Station/Branch	S.I.	A.S.I.	Constable
Baly	4	5	28
Howrah	10	8	14
Bantra	4	3	14
Malipanchghara	4	5	16
Golabari	8	9	24
Sibpur	6	6	18
Jagachha	2	2	10
Sankrail	2	2	10
Panchla	1	2	10
Jagatballavpur	1	1	10
Domjur	2	3	10
Bauria	1	1	8
Uluberia	3	4	14
Syampur	3	3	12
Bagnan	2	2	10
Amta	3	3	14
Uday Narayanpur	1	2	10
Lilua I.C.	2	2	10
Enforcement Branch	15	1	15
Intelligence Branch	18	16	75

Enforcement Branch

There is a separate establishment under the Superintendent of Police to deal with enforcement offences which is manned by 2 Inspectors, 15 Sub-Inspectors, an Assistant Sub-Inspector and 15 constables.

Intelligence Branch

The Intelligence Branch is another separate unit under the Superintendent of Police with 3 Inspectors, 18 Sub-Inspectors, 16 Assistant Sub-Inspectors and 75 constables.

[1-2] Source: The Superintendent of Police, Howrah.

Railway police

The Superintendent of Railway Police heads the G.R.P. forces employed for enforcement of the provisions of the Indian Railways Act of 1898 over the railway premises, as defined in the Act and falling within the district. He has under him a Deputy Superintendent of Police, 3 Inspectors, 18 Sub-Inspectors, 13 Assistant Sub-Inspectors, 14 Head Constables and 185 Constables.[1]

National Volunteer Force

The use of supplementary personnel for assisting the regular police force in times of crisis is not a recent innovation. Towards the close of the 19th century, special contingents of town police drawn from the local youth and not subject to the service conditions of the regular police were occasionally employed in this district as also elsewhere. The present organizations of this type are the National Volunteer Force and the Home Guards.

The National Volunteer Force is usually kept in reserve and it takes the field only when the regular police force is overworked. The N.V.F. at Howrah consists of a District Battalion, 175 strong. The deployment of such personnel on specific tasks has now become almost a daily feature of the police administration of the district.[2]

Home Guards

The Home Guards are of recent origin and they started functioning in the district from December 16, 1962 under the overall supervision of the Superintendent of Police. The organization has 71 officers, 50 of whom are posted in Howrah town and 21 at various rural points. It functions under a District Commandant as its leader and is looked after by an Inspector of Police designated Senior Adjutant and Quarter Master. The trained and untrained personnel, excluding officers, number 4,510, of whom 2,750 serve in the urban areas and 1,760 in the rural. The following table[3] gives the strength of trained Home Guards stationed at various places of the district.

Unit	Trained	
	Rural	Urban
Baly	—	92
Malipanchghara	—	98
Golabari	—	98
Bantra	—	58
Howrah	—	80
Sibpur	—	113
Jagachha	—	30
H.Q. unit Rifle Club	—	33
Uluberia	104	—
Bauria	39	—
Bagnan	44	—
Amta	22	—

(*contd.*)

[1] Source: Additional Superintendent of Police, Howrah.
[2-3] Source: Superintendent of Police, Howrah.

Unit	Trained	
	Rural	Urban
Uday Narayanpur	26	—
Syampur	80	—
Panchla	18	—
Sankrail	26	—
Jagatballavpur	43	—
Domjur	43	—
Total	445	602

Home Guards have been called up for various assignments during festive occasions in the urban areas besides being deployed on anti-smuggling and cordoning duties.

Rural police: chowkidars, dafadars, village resistance groups etc.

Chowkidars and Dafadars, not coming within the immediate ambit of the regular police force, are employed by the Anchal Panchayats for policing duties in rural areas. The history and organization of this wing has been dealt with in the Chapter XII on Local Self-Government.

There are Village Resistance Groups in the rural areas of the district. They are voluntary self-help organizations for guarding the life and property of the rural communities and are fostered and materially assisted by the police administration.

In the city of Howrah there is a Special Constabulary with about 120 members who form a link between the public and the police rendering assistance to the latter during religious festivals and in traffic control.

JAILS AND LOCK-UPS

The District Jail at Howrah and the Sub-Jail at Uluberia are the only two prisons in the district. There are besides 20 police lock-ups, one each in the 17 police stations, and the Lilua Investigating Centre and the Town Outposts at Dasnagar (P.S. Jagachha) and Nazirganj (P.S. Sankrail). Two magistrate's lock-ups also exist at Howrah and Uluberia.

History

Writing in 1872, C. N. Banerjei left behind an exhaustive account of the growth of the prison system in the district. Up to 1843, the offenders brought before the Howrah or Uluberia courts were all detained in the Alipore (24-Parganas) Jail. In 1847 certain old powder magazines at the Howrah Maidan were renovated and began to be used as a prison. It was decided in 1855 to abolish this jail and to reduce its status to that of a simple *hajut*. All prisoners sentenced for more than a month were transferred to Alipore or Hooghly. In 1864 the prison was restored to its former footing but it was used as a mere subdivisional lock-up, long term prisoners being transferred to other Jails.[1] By 1906-07, however, it became a District Jail of the

[1] C. N. Banerjei—op. cit. pp. 35-36.

third class. In 1909, when the previous District Gazetteer was published, it had "accommodation for 88 prisoners, viz., barracks without separate sleeping accommodation for 16 male convicts, 8 female convicts and 44 under-trial prisoners; cells for 4 European prisoners, 8 male and 2 female convicts; and a hospital with 6 beds."[1] The Uluberia Sub-Jail could then accommodate only 12 persons—10 males and 2 females.[2] By 1950 the accommodation at the District Jail had increased to 126 (116 males and 10 females) but that in the Uluberia Sub-Jail remained constant at 12.[3] At present the Howrah District Jail can house 416 prisoners (400 males and 16 females)[4] and the Uluberia Sub-Jail 55.[5] The District Jail has a whole-time Superintendent, a Jailor, a Deputy Jailor, a Medical Officer, a Compounder and a Teacher besides 3 Head Warders and 43 Warders. The Uluberia Sub-Jail is mainly meant for under-trial prisoners; those sentenced for more than a month are transferred to the District Jail.

Jail population

The following two tables[6] give details of the prison population at the Howrah District Jail and the Uluberia Sub-Jail between 1961 and 1965.

PRISON POPULATION AT HOWRAH DISTRICT JAIL: 1961-65

Classification of convicts	1961		1962		1963		1964		1965	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Not exceeding 1 month	2,297	57	2,293	51	3,229	28	3,584	88	4,002	323
Above 1 month but not exceeding 3 months	144	10	204	—	368	18	1,660	26	1,144	52
Above 3 months but not exceeding 6 months	94	—	142	—	338	3	370	2	441	21
Above 6 months but not exceeding 1 year	15	—	36	—	67	—	127	1	64	1
Above 1 year but not exceeding 2 years	9	—	13	—	8	—	17	—	12	—
Above 2 years but not exceeding 5 years	4	—	4	—	—	—	2	—	—	—
Above 5 years but not exceeding 10 years	—	—	1	—	—	—	—	—	—	—
Sentenced to death	—	—	—	—	—	—	—	—	—	—

[1] O'Malley and Chakravarti—op. cit. p. 132.
[2] loc. cit.
[3] A. Mitra—Census 1951, District Handbooks: Howrah, Calcutta, 1953. p. 140.
[4] Source: Superintendent, Howrah District Jail.
[5] Source: Inspector General of Prisons, West Bengal.
[6] Source: Superintendents, Howrah District Jail and Uluberia Sub-Jail.

PRISON POPULATION AT ULUBERIA SUB-JAIL: 1961-65

Classification of convicts	1961		1962		1963		1964		1965	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Not exceeding 1 month	169	13	142	2	185	—	135	—	136	—
Above 1 month but not exceeding 3 months	41	—	31	—	40	—	23	—	67	—
Above 3 months but not exceeding 6 months	8	—	17	—	17	—	9	—	22	—
Above 6 months but not exceeding 1 year	9	—	13	—	6	—	9	—	16	—
Above 1 year but not exceeding 2 years	10	—	3	—	8	—	7	—	7	—
Above 2 years but not exceeding 5 years	10	—	1	—	8	—	—	—	—	
Above 5 years but not exceeding 10 years	5	—	6	—	—	—	—	—	—	—
Sentenced to death	—	—	—	—	—	—	—	—	—	—

During the 5-year period under review the District and the Sub-Jail accommodated 21,857 and 696 convicts respectively accounting for 94.75% and 5.25% of the total prison population. Female prisoners constituted only 3.18% of the total number of convicts. It is also evident that prison terms were mainly confined to periods not exceeding 3 months; those extending up to a month and those exceeding that period but less than 3 months accounted for 74.2% and 16.9% of the total convictions respectively. There was no capital punishment during this period.

An analysis of the propensity to crimes in various age-groups may be interesting. The following two tables[1] classify the total jail population of the district during the 5-year period under review into 4 groups—under 16 years of age, from 16 to 40 years, from 40 to 60 years and above 60 years.

CONVICTS IN HOWRAH DISTRICT JAIL ACCORDING TO AGE AND SEX: 1961-65

Age-Group	1961		1962		1963		1964		1965	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under 16 years	208	3	202	16	241	20	278	—	—	—
16 to 40 years	2,098	38	2,105	26	3,632	29	5,349	114	5,147	335
40 to 60 years	225	26	356	9	102	—	109	3	501	62
Above 60 years	32	—	330	—	35	—	24	—	15	—

[1] Source: Superintendents of Howrah District Jail and Uluberia Sub-Jail.

CONVICTS IN ULUBERIA SUB-JAIL ACCORDING TO AGE AND SEX: 1961-65

Age-Group	1961		1962		1963		1964		1965	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Under 16 years	20	—	10	—	8	—	5	—	5	—
16 to 40 years	188	13	140	—	217	—	161	—	228	—
40 to 60 years	42	—	60	—	35	—	15	—	12	—
Above 60 years	10	—	5	—	4	—	2	—	3	—

It is not surprising that in both the jails by far the largest number of convicts belonged to the 16-40 years age-group.

Reformatory activities

In the District Jail there is a teacher for imparting primary education to juvenile convicts serving terms of more than 3 months. A library caters to the reading needs of all prisoners. Arrangements also exist for physical education and outdoor and indoor games. The district unit of the Information and Public Relations Department shows documentary films from time to time for the entertainment of prisoners. There are no such facilities in the Uluberia Sub-Jail.

Non-official visitors

Two groups of non-official visitors drawn from the elite of the respective towns pay visits to the two jails, look into the arrangements there, listen to the complaints of convicts or under-trial prisoners and make suggestions for betterment of the prison system.

Casual Vagrants' Home, Andul

The Casual Vagrants' Home now situated at 128 Andul Road, Howrah, was set up in 1943 at 24 Canal South Road, Calcutta to accommodate prisoners declared vagrants under the Bengal Vagrancy Act, 1943. It was then a composite institution with 4 wings—one for adult males, one for adult females, one for children and one for lepers. Subsequently, it came to house only adult males and was shifted to Burdwan town in 1954. In 1960 it was removed to its present site. The home stands on 8.5 acres of land and can accommodate 500 persons. The staff consists of a Manager, 2 Assistant Managers, a Junior Social Worker, a Medical Officer, 4 Teachers, 4 Instructors, 2 Nurses and 2 Compounders. The training imparted according to individual aptitude is oriented towards rehabilitation of the inmates after their release. The number of vagrants admitted, detained (and trained) and discharged between 1961 and 1966 is shown in the following table.

Year	No. of Inmates	Fresh Admissions	No. discharged
1961-62	396	178	115
1962-63	411	141	87
1963-64	413	76	50
1964-65	409	328	111
1965-66	466	201	149

The Home imparts vocational training in weaving, carpentry, pottery, clay-modelling, coir-weaving, electroplating, blacksmithy, welding, poultry-farming, agriculture, pisciculture, hair-cutting etc. The following table[1] gives the quantities and values of the goods turned out by the different sections of the institution during 1965-66.

Name of Section	Quantity	Value (Rs.)
Weaving	8,039 metres of cloth	13,337
Tailoring	20,989 pcs. of garments	21,189
Blacksmithy	311 pcs. of articles	2,045
Carpentry	124 pcs. of articles	2,630
Book-binding	--	3,374
Pottery and Clay-modelling	10,133 dolls, earthen pots etc.	2,017
Coir-weaving	190 coir mats and 158 kg. of coir strings	2,036
Pisciculture	155 kg. of fish	557
Agriculture (Vegetables)	—	5,046

Sundarbai Moolchand Mohotta Home, Lilua

The object of the Sundarbai Moolchand Mohotta Home at 8 Stark Road, Lilua, Howrah is to rescue and rehabilitate wayward children, adolescents and adults. It was opened on June 23, 1961 under the Directorate of Social Welfare, Government of West Bengal and consists of 6 wings—a Rescue Home for boys, a House of Detention for boys, a House of Detention for girls, a Rescue Home for women exposed to moral danger, an Industrial School for girls and a Foundling Home for children up to 3 years. The Rescue Home for women was previously situated at 45 Lower Circular Road, Calcutta and the House of Detention for girls at 85 Lower Circular Road, Calcutta which were merged with this institution in 1961. The main function of the Houses of Detention is to bring up juvenile delinquents, including uncontrollable children, who are committed to the institution by orders of Juvenile Courts under the West Bengal Children's Act, 1959 pending trial or enquiry. The Rescue Home for women protects stray girls and women exposed to moral danger. With a view to facilitating future rehabilitation of the inmates, the institution imparts general education and runs classes in tailoring, weaving etc. There are also health and recreational facilities for them. The State Government bears the entire expenses of this institution which is managed by a lady Superintendent who is helped by an Assistant Superintendent for each unit and a large staff consisting of 18 women and 38 men. The following table[2] gives details of the inmates of the Home for the 5-year period from 1962 to 1966.

[1] Source: Controller of Vagrancy, West Bengal.
[2] Source: Superintendent, Sundarbai Moolchand Mohotta Home.

Year	Inmates at beginning of the year	Admissions during the year	Discharged during the year	Inmates at end of the year	Number rehabilitated
1962	207	1,137	963	381	Nil
1963	381	1,417	1,430	368	20
1964	368	1,363	1,319	412	40
1965	412	2,183	2,046	549	60
1966	549	2,304	2,362	492	40

ADMINISTRATION OF JUSTICE

The administration of civil justice in a district is under the District Judge who is assisted by Additional District Judges, Subordinate Judges and Munsiffs. Criminal justice at lower levels, is administered by Magistrates with first, second or third class powers drawn from the cadres of Deputy Magistrates, Sub-Deputy Magistrates or Honorary Magistrates who are under the District Magistrate. Their appellate authority is the Sessions Judge (who is also the District Judge) or the Additional and Assistant Sessions Judges. Certain motions arising out of proceedings before the magisterial courts are within the concurrent jurisdiction of both the District Magistrate and the Sessions Judges.

History

During the Mughal period the Qazi was the administrator of the Islamic Law, both civil and criminal, based on Quaranic principles and the Mir'adl was a secular officer whose authority extended only to the cities and to actions not specifically covered by the religious laws. Under the Emperor, who was the supreme court of both original and appellate jurisdictions, the Chief Qazi functioned as the head of the judicial department appointing the subordinate Qazis posted in important cities and controlling the Mir'adls. Side by side with this judicial set-up, the local zemindars administered criminal justice within their areas with or without legal authority.[1] With the decline of Mughal supremacy, these landlords, by the second half of the 18th century, "were beyond doubt the *de facto* judges in every district within their jurisdictions."[2] Field in his Regulations of the Bengal Code published a list, claimed to have been circulated in a letter to the Committee of Curcuit dated the 15th August, 1772 which mentioned as many as 10 different types of judicial officers exercising exclusive, concurrent, and very frequently conflicting jurisdictions. By 1769 the Government at Fort William, "to put an end to the venality of judges," appointed supervisors throughout its realm which was followed by the judicial reforms of Warren Hastings. In 1790 according to the new plans of Lord Cornwallis the former district *fouzdāri* courts presided over by Muslim judges were abo-

[1] T. K. Banerjee—op. cit. p. 134.
[2] Verelst—A View of the Rise, Progress and Present State of the English Government in Bengal. London, 1772. p. 237.

lished and new courts known as Courts of Circuit were established in their place. The three provinces of Bengal, Bihar and Orissa were divided into four divisions each comprising several districts. The mobile circuit courts were to visit each division at regular intervals.[1] In 1792 the magistrates were authorized to try, for the first time, petty offences and inflict punishment not exceeding 15 days' imprisonment or fine not exceeding Rs. 50. The number of pending suits, however, continued to pile up and it was under Regulation 49 of 1803 that these arrears were sought to be liquidated by the appointment of Assistant District Judges. Within the framework of the said Regulation, provision was made for the appointment of Sadar Amins and the setting up of a new zilla court in 1795 at Hooghly which district then included most if not all of the present district of Howrah.[2]

"The Indian agency employed in the administration of civil justice was in the main, of two types: private and official. The private agency included the heads of villages and village panchayats. The official agency, on the other hand, consisted of native commissioners including munsiffs and sadar amins, the latter being established under Regulation 49 of 1803."[3]

Although Permanent Settlement had already been in operation, the undefined character of rights of tenures caused the number of litigations to go up by leaps and bounds and the problem was to separate the magistracy from the office of the judge in order to enable the latter to devote his time exclusively to the dispensation of civil justice. A re-organization of the judicial system effected by Regulation 5 of 1831 and subsequent Regulations invested the District Judges with Sessions powers but their magisterial functions were transferred to the Collectors.

The offices of Assistant and Joint Magistrates were first created in 1810 but were abolished later and replaced by those of Deputy Magistrates. The Hooghly-Howrah district was formed into separate administrative unit in 1793 and a Judge and a Magistrate were appointed there in the same year. The revenue jurisdiction of this district was separated only in 1819 prior to which it formed part of the Burdwan Collectorate. In 1832 the District Judge was re-designated as the District and Sessions Judge. Howrah as an independent magisterial charge was separated from Hooghly in 1843 and was placed under a Joint Magistrate but the judicial administration continued under a unified judgeship for the two districts. In 1839 there were 9 Munsiffs in the Hooghly-Howrah district stationed at Hooghly, Nansoria, Mahanad, Baidyabati, Rajpur, Dwarhatta, Kshirpai, Baly and Uluberia. In 1860 there were 10 magisterial and

[1] T. K. Banerjee—op. cit. pp. 146-7.
[2] B. B. Misra—op. cit. p. 266.
[3] B. B. Misra—op. cit. pp. 270-71.

22 civil and revenue courts in the district which increased to 16 and 30 respectively in 1870-71.[1]

"By the year 1861, the uniformity in the substantive and the procedural law of the country was achieved with the passing of the Indian Penal Code and the Indian Criminal Procedure Code. So, now to end the dual systems of courts, the High Court Act was passed by which the Supreme Court of Calcutta and *Sadar Adalat* were amalgamated into one. The High Court established under this Act started functioning in 1862. ... Below the High Court there are the District and Sessions Judges whose jurisdiction is usually, but not always, co-extensive with the District. He has power to try original criminal cases on committal and to hear criminal appeals from the decisions of first class magistrates within his jurisdiction. Below him there are the magistrates and a number of honorary magistrates. ... The fact is that the system which was introduced in Bengal in 1862, prevails even now without any substantial change having been made. That it should have stood the test of time for a century bears testimony to its suitability and worth."[2]

Civil Justice: present set-up

On January 1, 1938 an independent judgeship was created exclusively for the district. The District and Sessions Judge, Howrah has now under him 2 Additional District Judges, 3 Subordinate Judges, 7 Munsiffs, all stationed at Howrah besides a Munsiff at Uluberia and another at Amta.

Besides the District Judge there are two Additional District Judges who exercise equal powers with him regarding trying of suits, cases and appeals. The first Additional Judge is also vested with special powers for trying cases under the Land Acquisition Act and hearing appeals arising out of the Estate Acquisition Act cases and arbitration cases. The second Additional Judge has powers to try motor accident compensation cases. The three Subordinate Judges can try suits and cases of unlimited monetary amounts and, by virture of their offices, can dispose of S.C.C. (Small Cause Court) suit up to the value of Rs. 750. The Subordinate Judge of the first court also acts as the District Delegate and tries cases under the Indian Succession Act besides hearing appeals against orders relating to valuation and assessment of consolidated rates under the Calcutta Municipal Act as extended to the Howrah Municipality. All the three Subordinate Judges are also specially empowered to hear appeals from orders passed by the Thika Controller under the Calcutta Thika Tenancy Act of 1949.

There are five permanent Munsiffs' courts at Sadar. Two of them try suits under the ordinary procedure up to the value of Rs. 5,000 and the other three up to Rs. 3,500. The two temporary additional Munsiffs can similarly try ordinary procedure suits up to the value of

[1] Source: District & Sessions Judge, Hooghly.
[2] T. K. Banerjee—op. cit. p. 180.

Rs. 2,000. The five permanent Munsiffs at Sadar also try S.C.C. suits up to the value of Rs. 3,000, function as Controllers under the Calcutta Thika Tenancy Act and hear appeals under the Land Reforms Act. One Munsiff is the ex-officio Rent Controller under the West Bengal Premises Tenancy Act. The Munsiff of the third court, being the seniormost, acts as the Subdivisional Munsiff at Sadar with powers to try S.C.C. suits relating to ground rent.

The two Munsiffs at Amta and Uluberia can try suits under ordinary procedure up to the value of Rs. 3,500 and S.C.C. suits up to Rs. 3,000. They also hear appeals relating to Land Reforms Act and cases and function as Rent Controllers and District Delegates.

Workload

The following table[1] giving a yearwise break-up of suits instituted and disposed of during 1961 to 1966 would indicate the workload of the civil courts in the district.

SUITS INSTITUTED AND DISPOSED OF IN CIVIL COURTS OF HOWRAH DISTRICT: 1961-66

	Dist. Judge		Addl. Dist. Judge		Sub-Judge		Munsiffs	
Year	Instituted	Disposed	Instituted	Disposed	Instituted	Disposed	Instituted	Disposed
1961	93	81	—	—	785	666	4,095	4,686
1962	92	77	—	5	676	473	3,838	4,159
1963	126	92	1	5	819	718	3,857	3,826
1964	111	64	—	301	541	868	3,297	3,051
1965	135	85	—	46	585	533	3,045	3,602
1966	106	81	—	19	562	632	3,146	3,565

While these figures are self-explanatory, it should, however, be noted that many cases normally instituted before the District Judge are subsequently transferred for trial and disposal to the courts of Additional Judges.

The Following table[2] classifies the various categories of suits, cases and appeals which came up before the civil courts of the district between 1961 and 1966.

NATURE OF SUITS BEFORE CIVIL COURTS OF HOWRAH DISTRICT: 1961-66

	1961	1962	1963	1964	1965	1966
Suits						
S.C.C.	2,671	3,362	3,500	3,310	2,128	2,013
Money	3,139	2,954	2,921	2,710	2,314	2,209
Rent	38	34	32	31	30	27
Title	7,064	6,264	6,366	6,328	6,487	6,129

(contd.)

[1-2] Source: District & Sessions Judge, Howrah.

NATURE OF SUITS BEFORE CIVIL COURTS OF HOWRAH DISTRICT : 1961-66—*contd.*

	1961	1962	1963	1964	1965	1966
Cases						
Execution	3,856	3,564	3,815	3,954	1,970	1,953
Judl. Misc.	3,842	3,564	3,594	4,213	3,873	3,267
Non-Judl.	124	143	130	124	83	58
Appeals						
Regular	2,274	2,195	2,191	1,996	2,124	1,999
Misc.	1,745	634	596	546	562	587

The average duration of different types of cases before the various courts is shown in the following table[1] which equates each single hearing to one day.

DURATION (IN DAYS) OF CASES BEFORE CIVIL COURTS IN HOWRAH DISTRICT: 1961-65

Name of Courts	Year	Under Ordinary Procedure		Under S.C.C. Procedure		Civil Appeals	
		Contested	Un-contested	Contested	Un-contested	Contested	Un-contested
District Judge	1961	—	—	—	—	163	79
	1962	—	—	—	—	164	77
	1963	—	—	—	—	178	146
	1964	—	—	—	—	225	121
	1965	—	—	—	—	203	114
Addl. District Judge	1961	—	—	—	—	65	96
	1962	—	—	—	—	128	72
	1963	—	—	—	—	233	287
	1964	—	—	—	—	227	195
	1965	—	—	—	—	178	142
Subordinate Judge	1961	496	—	308	—	191	246
	1962	602	—	202	—	161	182
	1963	727	—	125	—	203	218
	1964	501	—	141	—	239	339
	1965	460	—	291	—	201	224
Munsiffs	1961	421	—	242	—	—	—
	1962	347	—	229	—	—	—
	1963	395	—	244	—	—	—
	1964	482	—	362	—	—	—
	1965	365	—	289	—	—	—

[1] Source: District & Sessions Judge, Howrah.

Trend of litigation

With the introduction of the Estates Acquisition Act, 1954 abolishing intermediary interests in land, the tenants have come directly under the State and the numerous rent suits which formerly used to be filed before the civil courts are now a thing of the past. But due to rapid industrialization and the growing pressure of population, rent cases and ejectment suits relating to urban premises have considerably increased. A large volume of litigation also springs now from the records of right prepared during revisionary settlement operations. With the growth of trade and commerce, suits affecting contracts and tort are also on the increase. Suits relating to title, possession and easement, however, show a downward trend. Due to control of usury and the stringency of the Money Lenders' Act, related suits have also decreased in number. As a corollary to progressive urbanization, motor vehicles cases also show a steep rise in numbers.

Criminal justice: present set-up

The District and Sessions Judge, the Additional District and Sessions Judges and the Subordinate and Assistant Sessions Judges, although basically a part of the district judiciary, form the upper echelons of the set-up meant for administration of criminal justice. Such courts in their original jurisdiction try cases on commitment from those of the first class Magistrates as also cases under special Acts when they sit as special courts. They also hear appeals in the first instance against the verdicts of magisterial courts. The following table[1] shows the various categories of cases heard by such courts during 1961-66.

CRIMINAL CASES BEFORE THE SESSIONS JUDGES, HOWRAH · 1961-66

Cases	1961	1962	1963	1964	1965	1966
Sessions	85	91	89	72	72	60
Special Court	23	45	43	42	37	39
Criminal Appeals	260	209	162	184	186	124

The average duration (one 'hearing' standing for a 'day') of such cases is set down in the following table.[2]

AVERAGE DURATION (IN DAYS) OF CRIMINAL CASES BEFORE SESSIONS COURTS OF HOWRAH DISTRICT: 1961-65

		Criminal Appeals		Sessions Trials		Special Court cases	
Name of Court	Year	Contested	Un-contested	Contested	Un-contested	Contested	Un-contested
District & Sessions Judge	1961	39	—	42	—	—	—
	1962	35	—	37	—	—	—
	1963	37	—	34	—	—	—
	1964	34	—	33	—	—	—
	1965	36	—	31	—	99	—

[1-2] Source: District & Sessions Judge, Howrah.

(contd.)

AVERAGE DURATION (IN DAYS) OF CRIMINAL CASES BEFORE SESSIONS COURTS OF HOWRAH DISTRICT: 1961-65—*contd.*

Name of Court	Year	Criminal Appeals		Sessions Trials		Special Court cases	
		Contested	Un-contested	Contested	Un-contested	Contested	Un-contested
Additional District & Sessions Judges	1961	42	—	46	—	105	—
	1962	40	—	39,	—	263	—
	1963	36	—	34	—	421	—
	1964	33	—	30	—	487	—
	1965	37	—	32	—	692	—
Subordinate & Assistant Sessions Judges	1961	31	—	48	—	—	—
	1962	38	—	34	—	—	—
	1963	36	—	29	—	—	—
	1964	37	—	32	—	—	—
	1965	32	—	28	—	—	—

Magistrates with first, second and third class powers sitting at the two subdivisional headquarters belong to the lower tier of the set-up administering criminal justice. The District Magistrate and the Additional District Magistrate head this wing, although they are not, except in the case of certain motions, the appellate authorities in regard to the decisions of magisterial courts. The Subdivisional Officers, by virtue of their posts, are also Subdivisional Magistrates under the Criminal Procedure Code and exercise jurisdiction over their respective subdivisions. Under the Subdivisional Magistrate at Sadar there are 6 first class and 3 second class trying Magistrates who try cases under the Indian Penal Code, the Criminal Procedure Code and other Acts. One of the first class Magistrates, exclusively tries cases under the Indian Railways Act and Acts dealt with by the Howrah G.R.P.S. He also holds mobile courts at suitable points on the Howrah-Amta Light Railway line. In addition, there is a Special Railway Magistrate with jurisdiction over the railway premises in 6 districts—Howrah, Hooghly, Burdwan, Birbhum, Nadia and Murshidabad. In the Uluberia subdivision, besides the Subdivisional Magistrate, there are 3 first class and a third class Magistrates. The following table[1] indicates the workload of the magisterial courts in the two subdivisions of the district.

WORKLOAD OF MAGISTERIAL COURTS IN HOWRAH DISTRICT: 1961-65

Sub-division		1960	1961	1962	1963	1964	1965
Sadar	Cases filed	48,034	34,136	28,599	37,651	38,905	36,926
	Cases disposed of	1,07,041	34,460	29,939	42,441	38,285	34,308
	Cases pending at end of year	18,729	18,405	17,065	12,275	12,895	15,513
Uluberia	Cases filed	2,272	2,022	1,708	1,267	1,883	1,979
	Cases disposed of	2,288	1,908	1,589	2,303	1,761	1,907
	Cases pending at end of year	289	403	522	486	608	[illegible]80

[1] Source: District Magistrate, Howrah.

Railway Court

The court of a Special Railway Magistrate was set up in 1936 when as a general policy the Government posted such Magistrates at a number of important railway stations on the East Indian Railway.[1] Prior to April, 1957, when it came under a stipendiary Magistrate, this court used to be held by an honorary Magistrate.[2] The police force assisting it consists of 7 Constables and a Habildar who accompany the mobile court wherever it is held.

Juvenile Court, Lilua

The Juvenile Court at Lilua, established under the West Bengal Children Act in August 1961, is generally presided over by a Presidency Magistrate who is assisted by some honorary Presidency Magistrates appointed by the Government.[3] During their absence the District Magistrate, Howrah can send on deputation a senior Magistrate from Sadar, specially empowered under the West Bengal Children Act, to attend to the work of the court. On its orders admissions are made into an attached borstal school run by the Social Welfare Department of the State Government. During the 5-year period from 1962 to 1966, 183 children were released by this court on bonds of good behaviour and the follow-up reports show that they were behaving properly.[4]

Probation of offenders

The West Bengal Offenders (Probation and Admonition) Act, 1954 was promulgated in Howrah district on September 13, 1956 and a Probation Officer was posted at the Bankshall Court, Calcutta with jurisdiction over the area under the Chief Presidency Magistrate, Calcutta as also the whole of the Howrah district. Subsequently on February 1, 1957 a Probation Officer exclusively for the district was posted at its headquarters. A second Probation Officer joined at Howrah in 1958. From May 2, 1960, the Probation of Offenders Act, 1958 (a Central Act) was enforced in the district providing for the release of offenders convicted for crimes not punishable with death or imprisonment for life irrespective of age. During the 5-year period from 1961 to 1965 a total of 58 offenders were so released who did not pass through the Juvenile Court at Lilua.[5] Of them 42 were convicted for theft, 2 for violating the modesty of women, one under the Explosives Act and the others under various sections of the Indian Penal Code. The probation system at Howrah (excepting the cases falling within the jurisdiction of the Juvenile Courts) is mainly restricted to the adult population.

Divorce

Suits under the Hindu Marriage Act for restoration of conjugal rights, judicial separation, declaring a marriage void or for dissolution of marital ties are on the increase both in the urban and rural

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[1] Report on the Administration of Criminal Justice in the Presidency of Bengal, 1936. Calcutta, 1937.

[2] Source: Special Railway Magistrate, Howrah.

[3] Report on the Administration of Criminal Justice in West Bengal, 1961. Calcutta, 1962.

[4] Source: Magistrate-in-Charge, Juvenile Court, Lilua.

[5] Source: Probation Officer, Howrah.

areas of the district. The following table[1] would indicate the general increase in the number of such cases and the results thereof.

SUITS UNDER HINDU MARRIAGE ACT IN HOWRAH DISTRICT: 1956-66

Year	Suits instituted	Suits allowed
1956	2	—
1957	—	—
1958	80	23
1959	32	10
1960	46	12
1961	70	40
1962	78	47
1963	106	50
1964	100	34
1965	108	60
1966	83	45

State Assistance

In civil litigation State assistance is available only under orders 33 and 34 of the Civil Procedure Code which provide for remission of stamp duty due from persons belonging to the Scheduled Tribes. A panel of government pleaders maintained by the District Tribal Welfare Officer also gives them legal advice and assistance. In criminal cases State assistance is available for the defence of an undefended accused charged with murder. It is reported that an unofficial committee has been recently formed in the district for giving legal aid to poor litigants.

Separation of the judiciary from the executive

Separation of the judiciary from the executive has come into effect only in the higher echelons as trial of sessions cases by executive officers has long been abolished. But at lower levels, the Magistrates trying criminal cases are still under the administrative control of the District Magistrate, although the District and Sessions Judge is their appellate authority. By an executive order, a kind of functional separation has been sought to be effected by enjoining that trying Magistrates should be given judicial duties exclusively. Complete separation of the judiciary from the executive has not yet been possible.

Panchāyati adālats

This subject has been discussed in Chapter XII on Local Self-Government.

LEGAL PROFESSION & BAR ASSOCIATIONS

The number of lawyers (of various categories) has been given in Chapter VIII on Economic Trends. The District Magistrate main-

[1] Source: District & Sessions Judge, Howrah.

tains two panels of lawyers for attending to civil and criminal cases of the State. The seniormost retained lawyer on the civil side is known as the Government Pleader whose advice on various matters is also sought by the local officers. His counterpart on the criminal side is the Public Prosecutor. The panel pleaders are commissioned from time to time for specific cases, civil or criminal. Customarily, panel pleaders appear before the sessions courts while in the magisterial courts the State is represented by police prosecutors of the ranks of Inspector or Sub-Inspector who belong to the regular police force but so long as they are assigned such duties, they function as officers of the court. The present strength of such personnel in the district is shown below:[1]

POLICE PROSECUTORS IN HOWRAH DISTRICT: 1967

Place	Inspector	Sub-Inspector	Assistant Sub-Inspector
Sadar	1	9	12
Uluberia	—	3	3

Bar Associations

The Secretary, Howrah Bar Association, reports that the present membership of his organization is 197. It has arrangements for rendering free or cheap legal aid to poor litigants. Another Bar Association exists at Uluberia with 15 Advocates, 3 Pleaders and 8 Mukhtears as its members. Both the associations have fairly well-stocked libraries.

[1] Source: Superintendent of Police, Howrah.

CHAPTER XII

LOCAL SELF-GOVERNMENT

HISTORY OF LOCAL SELF-GOVERNMENT IN THE DISTRICT

The first rudimentary steps towards local self-government were taken under certain Regulations and Acts[1] passed during the first half of the 19th century which provided for the appointment of Chowkidars and conservancy in towns. "But in 1846", writes C. N. Banerjei,[2] "Government determined that this branch of public administration should be represented by the public, whose sympathies it was desirable to enlist for placing the conservancy of towns on a better footing, by the appointment of a Committee, whose duties were merely to arrange for the general conservancy of towns from local funds and taxes." Act XXI of 1857 empowered the Magistrate of Howrah to deal with all sorts of nuisances and was named the Howrah Offence Act.[3] The next Act to deal with the district was Act XII of 1858, under which the Government appointed the first Municipal Committee which held its first meeting on 19.1.1863.[4] Meanwhile, Unions and Panchayats were constituted in 1860 under Act XX of 1856 but they effected little material improvement to the town of Howrah.[5] "Owing to this unsatisfactory state of things, conservancy and drainage were sadly neglected and consequently Municipal administration, notwithstanding the realization of taxes, gave no satisfaction either to the Government or to the public at large. The neglected state of the town, its bad conservancy, the disreputable state of its roads and the foetid smells from the drains were therefore made the basis of a memorial to the Lieutenant Governor who was requested to appoint a Committee not exactly Municipal but which could deal with questions of conservancy and drainage. Government took two years to come to a decision, and then appointed a Committee. The Municipal revenues were placed at the disposal of this Committee immediately on its appointment in 1862."[6] Then came into operation Act III (Municipal District Improvements Act) of 1864 under which the Howrah Municipality was reconstituted. Baly was included within the municipal limits of Howrah under Act XXX of 1864, but from April 1. 1883 it came to form a separate

[1] Regulations XXII of 1816, VII of 1817, III of 1821, II of 1832 and Act XV of 1837.

[2] C. N. Banerjei—An account of Howrah: Past and Present. Calcutta, 1872. p. 36.

[3] J. Bonnerjee—Howrah Civic Companion. Howrah, 1955. p. 49.

[4] ibid. pp. 50-51.

[5] C. N. Banerjei—op. cit. p. 36.

[6] ibid. pp. 36-37.

municipality.[1] Another municipality at Uluberia came into existence in 1903 but was abolished in 1907.[2]

The Howrah District Road Cess Committee, with the Collector as its Chairman, was established under Act X of 1871. Responsible for fixing the rates of road cess and building and maintenance of roads in the district, it was the precursor of the District Board which was constituted on December 8, 1886 under Act III of 1885 with Mr. E. V. Westmacott, I.C.S., as its Chairman. Two Local Boards were also established, one for each subdivision, with the Subdivisional Officers as their Chairmen, for the maintenance of roads and ferries, management of primary education, and supervision of sanitation but they were abolished in 1940.[3] "In July 1895, Union Committees were formed in thanas Domjur and Jagatballavpur in the Howrah subdivision and in Amta and Bagnan in the Uluberia subdivison; while Uluberia was constituted an Union Committee in September, 1907."[4]

The next phase was reached with the Indian struggle for freedom leading to the Montagu Chelmsford Reforms of 1919 which enhanced the administrative powers of the local self-governing bodies in the district. Under the provisions of Bengal Act V of 1919, Union Boards came into existence for the performance of local services and proper maintenance of the rural police. Their number in the Sadar and Uluberia subdivisions were 34 and 84 respectively.[5] They, however, ceased to exist with the enforcement of West Bengal Act I of 1957 which authorized the establishment of Anchal and Gram Panchayats. According to the principle of democratic decentralization, peoples' participation in local self-government was accorded greater recognition in West Bengal Act XXV of 1963 under the provisions of which the Zilla Parishad replaced the District Board on October 2, 1964 and Anchalik Parishads were created at the Block level.

MUNICIPALITIES

There are two municipalities in the district—Howrah and Baly. Their area in sq. miles, number of occupied residential houses and population are shown below:[6]

Name of Municipality	Area in sq. miles	No. of occupied residential houses	Population
Howrah	11.13	2,16,266	5,12,598
Baly	4.56	48,296	1,01,159

[1] Bejoy Krishna Bhattacharyya—Municipal Administration in Bengal, Part I. Calcutta, 1936. p. 30.
[2] L. S. S. O'Malley & Monmohan Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 134.
[3] Source: Chairman, Howrah Zilla Parishad.
[4] L. S. S. O'Malley & Monmohan Chakravarti—op. cit. p. 134.
[5] Source: Subdivisional Officers, Sadar and Uluberia Subdivisions.
[6] Census of India 1961, West Bengal & Sikkim, Vol. XVI, Part II-A, General Population Tables.

Together, the two municipalities cover 2.8% of the area, 33.61% of occupied residential houses and 30.1% of the population of the district.

Organization and structure

Both the municipalities are governed by the Bengal Municipal Act, 1932 under which the Commissioners, elected for a term of 4 years from constituencies known as wards, are the custodians of all municipal power. The last date of municipal elections in Howrah was March 26, 1961, and the Baly Municipality was superseded on January 2, 1963. During 1965-66 the Howrah Municipality had 30 wards and Baly had 5. Responsible for the overall working of the municipality, the Chairman, elected from among the Commissioners, presides over the municipal meetings. The Vice-Chairman, who is also elected from among the Commissioners, is vested with certain powers[1] and usually performs the duties of the Chairman as delegated by the latter. Baly being a superseded municipality is headed by an Administrator appointed by the State Government.

Standing Committees

While the appointment of an Education Committee is mandatory,[2] the Commissioners appoint other Standing Committees for efficient discharge of business. During 1965-66, Howrah Municipality had 14 such Standing Committees, while Baly had none as it was superseded. The names of these Committees under the Howrah Municipality, their respective number of members and the frequency of meetings held by them during 1965-66 are given below:[3]

Sl. No.	Name of Standing Committee	No of members	No. of meetings held during 1965-66
1	Finance & Establishment Committee	12	23
2	Building Committee	12	22
3	Works Committee	12	8
4	Water Supply Committee	12	2
5	Health Committee	12	9
6	Road & Bustee Committee	12	5
7	Primary Education Committee	9	2
8	Education Committee	8	1
9	By-law and Rules Committee	12	Nil
10	Revision of Pay-scales Committee	7	Nil
11	T. B. Committee	6	5
12	Licence Appeal Bench Committee	12	2
13	Joint Primary Education & Education Committee	12	1
14	Assessment Appeal Committee	—	—

[1] Notification No. 6499 M of November 21, 1935 of the Govt. of Bengal.
[2] Section 456, Bengal Municipal Act, 1932.
[3] Source: Secretary, Howrah Municipality.

Municipal functions

The major functions of these municipalities are construction and maintenance of roads, street lighting, water supply, drainage and conservancy services, night-soil removal, running of dispensaries and maternity centres, ambulance service, vaccination and inoculation, registration of births and deaths, supervision of markets, inspection of foodstuff and drugs, maintenance of ferry services and primary education and giving grants-in-aid to other educational institutions and public libraries.

Personnel pattern

For executing such varied business, the Howrah municipality had during 1965-66 nine departments and Baly had eight. The following table indicates the names of the departments, designations of the departmental heads, and the respective number of indoor and outdoor staff.

PERSONNEL STATISTICS OF HOWRAH AND BALY MUNICIPALITIES: 1965-66

Name of Department	Designation of Head of Department	No. of indoor staff	No. of outdoor staff
Howrah Municipality			
General Department	Secretary	87	--
Engineering Department	Chief Engineer	53	232
Collection Department	Collector	41	108
Assessment Department	Assessor	71	43
Law Department	Law & Licence Officer	12	--
Licence Department	-do-	16	20
Accounts Department	Chief Accountant	65	--
Health Department	Health Officer	25	113
Stores & Forms Department	Superintendent of Stores	nil	—
Baly Municipality			
General Department	Head Clerk	29	7
Collection Department	Tax Collector	12	38
Accounts Department	Accountant	7	nil
Health & Conservancy Department	Health Officer	6	431
Assessment Department	Head Clerk	4	nil
Waterworks Department	Waterworks Superintendent	10	48
Engineering Department	—	—	6
Vehicles Department	Vehicle-in-Charge	8	7

Public Works

Roads form a major item of public works of the municipalities. The table below gives the lengths of pucca and kutcha roads maintained by the two municipalities during 1965-66.[1]

LENGTH OF ROADS (IN KM.) WITHIN HOWRAH AND BALY MUNICIPALITIES: 1965-66

Name of Municipality	Pucca	Kutcha	Total
Howrah	213	15	228
Baly	47	32	79

New road construction programmes of the municipalities now form a part of the State Five Year Plans to which the State and municipal contributions are two-thirds and one-third respectively.

Public safety

Although public safety includes fire fighting, the municipalities have nothing to do about it as the Directorate of Fire Services is responsible for the same. The municipalities, however, look after street lighting and the following table gives the number of electric street lights maintained by each of the municipalities during 1965-66, their daily average consumption of power and sources of supply.[2]

Name of Municipality	No. of electric street lights	Daily average consumption of power (in Kilowatts)	Source of supply
Howrah	6,722	5,384	1. Calcutta Electric Supply Corporation
			2. West Bengal State Electricity Board
Baly	2,042	Not available	Calcutta Electric Supply Corporation

Public instruction

The following table indicates the number of primary schools directly managed by the two municipalities, their aggregate roll strength and the number of teaching staff during 1965-66.[3]

Name of Municipality	No. of primary schools	No. of students		No. of teaching staff
		Boys	Girls	
Howrah	25	3,847	896	124
Baly	5	741	687	44

The Howrah municipality also gave grants-in-aid to 213 schools and 141 libraries, while Baly aided 27 primary schools, 5 *tôls* and 21 libraries.

[1-3] Source: Secretary, Howrah Municipality and Administrator, Baly Municipality.

Public Health

As regards public health services, the Howrah Municipality maintained during 1965-66 one hospital, one ayurvedic, 5 allopathic and 10 homoeopathic dispensaries, one X-ray clinic and 5 midwifery centres. Besides, the municipality aided 3 dispensaries, bore the expenses of a few beds at the K. S. Ray T. B. Hospital (Calcutta) and ran a fleet of 3 ambulance vans which attended to 4,923 calls. During the same year the Baly Municipality maintained 2 dispensaries and 2 ambulance vans which attended to 377 calls. Statistics relating to vaccinations and inoculations undertaken by the two municipalities during 1965-66 are given below.[1]

Name of Municipality	No. of Primary Vaccinations	No. of Re-Vaccinations	No. of Inoculations
Howrah	19,331	2,47,790	3,90,005
Baly	5,334	19,710	33,017

Drainage and conservancy

Both the municipalities maintained pucca and kutcha drains, the lengths of which during 1965-66 were as follows.[2]

Name of Municipality	Length of Drains (in km.)		
	Pucca	Kutcha	Total
Howrah	274	97	371
Baly	74	64	138

During the same year the Howrah Municipality removed on an average 44,080 gallons of night-soil per day and Baly removed 960 cubic feet. For this purpose Howrah maintained 59 block sardars, 19 barrel-carts and 1,397 tubs while Baly had 176 night-soil cleaners, 30 trailor men and 30 night-soil trunk trailors. Neither of the municipalities had proper arrangements for sullage removal.

Municipalities also look after proper maintenance of markets, shops, restaurants and slaughter houses and serve notices for construction of new privies, improvement of insanitary or inefficient privies, betterment of insanitary tanks, draining or levelling of low lands and removal of water hyacinth, the relevant figures for which, valid for 1965-66, are given below.[3]

Notices served	Municipality	
	Howrah	Baly
For improvement of insanitary privies	25	nil
For improvement of inefficient privies	103	33
For construction of new privies	13	38
For betterment of insanitary tanks	10	2
For draining or levelling of low lands	15	nil
For removal of water hyacinth	6	nil

[1-3] Source: Secretary, Howrah Municipality and Administrator, Baly Municipality.

Burial grounds/ Burning Ghats

The municipalities keep an account of the disposal of the dead at the various municipal cremation or burial grounds. They also provide for the funeral of the pauper dead. The Howrah Municipality maintains 3 burning ghats and 7 burial grounds while Baly maintains 2 burning ghats and 2 burial grounds.[1]

Water supply

With a view to relieving acute scarcity of potable water in the densely populated Howrah municipal area, an emergency water supply scheme was launched on 29.9.64 at an estimated cost of as big a sum as Rs. 1,36,00,000 for the construction of 19 elevated reservoirs, 19 clear water reservoirs, 38 iron eliminating plants, 38 borehole pump-houses and sinking of 38 tube-wells (6") and laying of 2,67,140 rft. pipeline. So far 16 elevated reservoirs, 14 borehole pump-houses, 29 tube-wells and 2,12,844 rft. pipeline have been installed at an expenditure of Rs. 60,67,105.[2] In the Bály municipal area, 7 deep tube-wells (6") have been sunk along with the construction of 7 borehole pump-houses and 9 borehole pump sets. Besides, there are 4 iron elimination plants, 3 high lift pump-houses, 3 clear water reservoirs and 3 elevated reservoirs. The total length of the distribution system is 2,13,560 rft. All these installations cost Rs. 22,15,523.[3] The following table[4] shows the total installed capacity of filtered water in gallons, number of house connexions provided, number of tube-wells below and above 5" and the average daily supply of filtered water in gallons per head of municipal population:

WATER SUPPLY IN HOWRAH AND BALY MUNICIPALITIES: 1965-66

	Howrah	Baly
Total installed capacity of filtered water (in gallons)	Not available	75,000 (per hour)
Number of house connexions provided	14,526	738
Number of tube-wells below 5" maintained	2,564	155
Number of tube-wells above 5" maintained	18	6
Average daily per capita supply of filtered water (in gallons)	25	6.53

Rate-payers

The population-rate-payers ratio in the two municipalities in 1965-66 is given below:

Name of Municipality	Population	No. of rate-payers	Percentage of col. 3 to col. 2
Howrah	5,12,598	45,368	8.8
Baly	1,01,159	9,051	8.8

[1] Source: Secretary, Howrah Municipality and Administrator, Baly Municipality.
[2] Source: Executive Engineer, Howrah Division. Public Health Engineering.
[3] Source: Executive Engineer, Western Division, Public Health Engineering.
[4] Source: Secretary, Howrah Municipality and Administrator, Baly Municipality.

Municipal finances

The following table indicates the main sources and amounts of income of the two municipalities during 1965-66.[1]

Head of Income	Amount of Municipal Income (in Rs.)	
	Howrah	Baly
Rates and Taxes	71,41,351	15,86,416
Realization under special Acts	3,666	Nil
Revenue derived from municipal property and powers apart from taxation	2,06,543	18,119
Grants and contributions	22,41,394	3,32,542
Miscellaneous	3,45,126	1,55,403
Total ordinary income	99,38,080	20,92,480

The table below gives the heads of expenditure with respective amounts for 1965-66.[2]

Head of Expenditure	Amount of Municipal Expenditure (in Rs.)	
	Howrah	Baly
General administration and collection charges	12.34,612	2,21,595
Public safety	2.13,530	77,292
Public health & convenience	68,40,363	14,15,561
Public instruction	4,55,456	1,55,643
Miscellaneous	7,28,233	66,628
Total ordinary expenditure	94,72,194	19,36,719

Howrah Municipal Corporation

West Bengal Act XVII of 1965 (The Howrah Municipal Act, 1965) authorized the establishment of a Municipal Corporation of Howrah. The provisions of the Calcutta Municipal Act, 1951 apply, *mutatis mutandis*, to this corporate body to the extent they are not repugnant to the former Act.

This new Corporation comprises an area of 24.17 sq. miles covering the areas of the Howrah and Baly municipalities and certain adjoining non-municipal areas inhabited by 6,80,000 persons. In an extraordinary issue of the Calcutta Gazette dated the 24th July, 1965 its boundaries were defined as follows: "A line drawn eastward from the point where the eastern edge of the Eastern Railway meets the Baly Khal along the southern bank of the said Khal to the point where it meets the river Hooghly; thence southward along the western bank of the river Hooghly and westward along its northern bank to the point where it meets the eastern boundary of mouza Podra in Sankrail

[1-2] Source: Secretary, Howrah Municipality and Administrator, Baly Municipality.

police station; thence northward along the western boundary of mouza Goaberia to the point where it meets the western boundary of mouza Thana Makua—both in Sankrail police station; thence northward along the western boundary of mouza Thana Makua to the point where it meets the southern boundary of mouza Sultanpur in Jagachha police station; thence westward along the southern boundaries of mouzas Sultanpur and Unsani in Jagachha police station to the point where it meets the eastern boundary of mouza Puilya in the same police station; thence westward along the southern boundary of mouza Puilya to the point where it meets the western boundary of the same mouza; thence northward along the western boundary of mouza Puilya to the point where it meets the western boundary of mouza Unsani; thence northward along the western boundary of mouza Unsani to the point where it meets the northern boundary of the same mouza; thence eastward along the northern boundary of mouza Unsani to the point where it meets the western boundary of mouza Jagachha in Jagachha police station; thence northward along the western boundaries of mouzas Jagachha, Dharsa and Baltikuri in the same police station to the point where it meets the northern boundary of the last-named mouza; thence eastward along the northern boundary of mouza Baltikuri to the point where it meets the southern boundary of mouza Chakpara in Baly police station; thence eastward along the southern boundary of mouza Chakpara to the point where it meets the eastern boundary of the same mouza; thence northward along the eastern boundary of mouza Chakpara to the point where it meets the southern boundary of mouza Baly in Baly police station; thence eastward along the southern boundary of mouza Baly to the point where it meets the eastern edge of the Eastern Railway; thence northward along the eastern edge of the Eastern Railway to the point where it meets the southern bank of the Baly Khal."

This area has been divided into 55 wards, each to return an elected Councillor who would elect 5 Aldermen while the Chairman of the Howrah Improvement Trust would be an *ex-officio* Councillor.

The properties, rights, liabilities and obligations of the Howrah and Baly Municipalities, Union Boards or Panchayats, as the case may be, falling within the Corporation area shall vest in it and the persons employed by these institutions shall continue to serve the new organization.

The Corporation shall at its first meeting each year elect from amongst its Councillors a Mayor and a Deputy Mayor whose business would be to see that policies of the Corporation are properly framed and implemented. For this purpose, Standing Committees on education, accounts, taxation and finance, health, town planning and improvement, works, buildings, public utilities and markets, water-supply etc. should be constituted, each of which at its first meeting

every year shall elect a Chairman and a Deputy Chairman from amongst the Councillors and Aldermen composing it. A Commissioner appointed by the State Government on the recommendation of the State Public Service Commission shall be the custodian of all executive power for carrying out the provisions of the Act. He would be responsible for the custody of all records and the officers and staff of the Corporation shall be subordinate to him. He would also lay before the Standing Finance Committee annual estimates of receipts, expenditures, balances and a statement on proposed taxes on the basis of which the Corporation's budget would be framed.[1]

District Board during 1963-64

During 1963-64, the last year of its existence, the Howrah District Board had 16 members and all of them were Hindu males. It had 3 Standing Committees on Finance, Public Works and Education and the number of meetings held by them during the year were five, two and one respectively. The Board maintained 64.32 km. of metalled roads, 342.72 km. of unmetalled roads, a number of bridges and culverts and sunk and re-sunk 76 tube-wells during the period under review when it also maintained 9 allopathic dispensaries and aided 4 union board dispensaries, 2 homoeopathic dispensaries and a maternity and child welfare clinic. Educational institutions aided by the Board were 3 junior high schools, 8 *chatuspāṭhis* and 34 public libraries. It also awarded stipends to 3 students. The following table[2] gives an account of the income and expenditure of the Board during the year 1963-64.

INCOME AND EXPENDITURE OF HOWRAH DISTRICT BOARD: 1963-64

Income		Expenditure	
Head	Amount (Rs.)	Head	Amount (Rs.)
Local rates & cesses	1,34,110	General administration	38,593
Government grants & contributions	45,922	Education	3,715
		Medical & public health	54,122
Civil works	50,253	Civil works	1,97,104
Miscellaneous	1,43,438	Miscellaneous	43,968
Total ordinary income (excluding opening balance)	1,93,691	Total ordinary expenditure	1,57,470

[1] The first general election for constituting the proposed Corporation was held on 21st May 1967. Before the election was held, two petitions were moved before the Hon'ble High Court at Calcutta. As a result, Civil Rule Nos. 548 (W)/67 and 558 (W)/67 were issued. Judgement was finally passed on 30th July 1969 in C. R. No. 558 (W)/1967 and the establishment of the said Corporation was held illegal on the ground that no notification had been issued under section 6 (1) (b) of Bengal Municipal Act, 1932 for the inclusion of the area comprised in Baly Municipality within the said Corporation. An appeal being FMAT No. 2725-2767/69 has meanwhile been preferred in the Hon'ble High Court and the matter is still pending.

[2] Source: Chairman, Howrah Zilla Parishad.

PANCHAYATI INSTITUTIONS

Zilla Parishad

In pursuance of the general policy of democratic decentralization, the Government of West Bengal passed the West Bengal Zilla Parishads Act of 1963 under which the Howrah Zilla Parishad, having jurisdiction over the whole of the district except the area covered by the newly formed Howrah Corporation, was established on October 2, 1964. In 1965-66 it had 49 members of whom 47 were males and 2 females; 46 of them, again, were Hindus (including 4 belonging to Scheduled Castes) and 3 were Muslims. The two Subdivisional Officers and the District Panchayat Officer were associate members.[1]

Standing Committees

During 1965-66 the Howrah Zilla Parishad had 6 Standing Committees to attend to specific matters. Their names, the subjects dealt with and the number of meetings held by each during the said year are given below.[2]

Name of Standing Committee	Subjects dealt with	No. of meetings held in 1965-66
Finance & Establishment	Finance, budget, taxation, administration, establishment, planning, co-ordination & supervision	14
Public Health	Public health, sanitation, nutrition, rural water supply, dispensaries, hospitals, family planning	12
Public Works	Roads, bridges, culverts, construction and maintenance of public buildings, works & properties, rural housing	13

(contd.)

[1] "The members and associate members will normally hold office for a period of four years, and apart from the associate members, the following persons will be members of a Zilla Parishad:

(*i*) The Presidents of Anchalik Parishads of the development blocks within the district, *ex-officio*;

(*ii*) two Adhyakshas (Presidents) of Gram Panchayats, elected by the Adhyakshas from among themselves, one from each of the two constituencies into which each subdivision is to be divided;

(*iii*) members of the Union House of the People or State Legislative Assembly whose constituencies comprise the district or any part thereof, and who are not Ministers;

(*iv*) members of the Union Council of States or State Legislative Council, not being Ministers and having a place of residence in the district;

(*v*) the Chairman of a municipality or Mayor of a municipal corporation in the district, to be appointed by the State Govt.;

(*vi*) the president of the District School Board, *ex-officio*; and

(*vii*) two women having a place of residence in the district, to be appointed by the State Govt. The State Govt. will thus have at least three nominees on the Zilla Parishad, in addition to the officials who will be associate members. The rest of the members will be either indirectly elected or enjoy membership *ex-officio*. Thus, a Zilla Parishad will link together a number of bodies, viz. Gram Panchayats, Anchal Panchayats, Anchalik Parishads, municipalities, District School Boards, the State Legislature and even the Union Parliament.": Mohit Bhattacharyya—Calcutta Research Studies, No. 5. Rural Self-Government in Metropolitan Calcutta. New York, 1965, pp. 22-33.

[2] Source: Chairman, Howrah Zilla Parishad.

Name of Standing Committee	Subjects dealt with	No. of meetings held in 1965-66
Agriculture & Irrigation	Agriculture, food production, irrigation, forests, fisheries, animal husbandry, poultry, veterinary services	13
Industry & Co-operation	Marketing, warehousing, food-processing, co-operative societies, rural credit, small savings, cottage industries	10
Public & Social Welfare	Social education, recreation, social welfare including welfare of women, children and backward communities, tribal welfare, adult education, information and mass communication, publicity & statistics	13

Secretary

The District Panchyat Officer is to function as the *ex-officio* Secretary of the Zilla Parishad for four years after its establishment. He is responsible through the Chairman to the Zilla Parishad and its Standing Committees in all matters relating to budget, loans, receipts, expenditure, fines and penalties, custody of Parishad's fund in Government treasury, contributions and grants received from the Government or any local authority, creation of posts and framing of by-laws. He prepares the annual budget in consultation with various district-level officers and submits it to the Finance and Establishment Committee with whose recommendations it goes to the State Government through the Zilla Parishad. He is assisted by an Executive Officer who signs all important correspondence of the Parishad with the State Government and inspects the working of the Zilla and Anchalik Parishads.

The Executive Officer

The Executive Officer is appointed by the State Government but is removable by a resolution of not less than two-thirds of the Parishad members. He works under the administrative control of the Chairman but is also responsible for complying with the directions given by the Secretary. Usually, all correspondence of the Parishad and its Standing Committees (other than that attended to by the Secretary) is carried on by him and the records and accounts remain in his custody. The administration of the office rests with him and he secures co-ordination between the Parishad, its Standing Committees and the district-level officers.

During 1965-66 the Parishad employed a District Engineer, 2 Draftsmen-Estimators, a Surveyor, 2 Overseers, 2 Sub-Overseers, 4 Tube-well Experts, 9 Medical Officers attached to charitable dispensaries, 9 Compounders, a Store-keeper, 2 Jeep Drivers, 7 Upper Division Assistants, 8 Lower Division Assistants, 2 Steno-typists and a number of inferior staff.[1] The following table[2] indicates the financial position of the Howrah Zilla Parishad during 1965-66.

[1-2] Source: Chairman, Howrah Zilla Parishad.

Income		Expenditure	
Head	Amount (Rs.)	Head	Amount (Rs.)
Provincial rates			
(*a*) Land Revenue	63,000	General Administration	66,285
(*b*) Grant in lieu of cess	2,67,037	Law & Justice	2,285
Hospital & Dispensary receipts	6,404	Education	18,161
		Medical	81,423
Miscellaneous contributions from Govt. in respect of G.R., T.R., Augmentation Grant, Subvention etc.	8,17,048	Superintendent	9,309
		Stationery & Printing	4,554
Civil Works	86,211	Miscellaneous (G.R., T.R.)	6,40,253
Other miscellaneous income	91,985	Civil Work	2,45,041
		Other miscellaneous expenditure	46,798

Anchalik Parishads

As intermediate authorities between the Zilla Parishad at the district level and the Anchal and Gram Panchayats at the Union and village levels, 14 Anchalik Parishads, each covering the area of a Block, are functioning in the district. Of these, 5 are in Sadar and 9 in Uluberia subdivision. A body corporate with consequent rights and duties, an Anchalik Parishad consists of several members and an associate member, the latter being the Block Development Officer who has no right to vote. The Pradhans of Anchal Panchayats within the Block are *ex-officio* members of the Anchalik Parishad. The Adhyakshas of Gram Panchayats within the territorial jurisdiction of each Anchal Panchayat elect one amongst them to become a member of the Anchalik Parishad. The members of the Union House of People, State Legislative Assembly, Union Council of States and State Legislative Council having a place of residence within the jurisdiction of the Anchalik Parishad automatically become its members. Besides, the State Government appoints as members two women and two persons belonging to backward classes and fulfilling the same residential qualification. The members ordinarily hold office for a period of four years and elect for the same period a President and a Vice-President from amongst themselves. Each Anchalik Parishad works through several Standing Committees on finance and establishment, public health, public works, agriculture and irrigation, industry and co-operation, public and social welfare, and primary education. The responsibility to co-ordinate and integrate the development activities of the Anchal Panchayats within the Block area rests with the Anchalik Parishads which also exercise general supervisory powers over Anchal and Gram Panchayats falling under them. Each Anchalik Parishad maintains a fund to which are credited contributions, grants

or loans given by the Union or the State Government and the Zilla Parishad and all receipts on account of tolls, rates and fees levied by it, and from this fund the Parishad incurs its diverse expenditure. The following table[1] indicates the receipts and expenditure of each Anchalik Parishad in Howrah district during the year 1965-66.

Name of Anchalik Parishad	Total income excluding opening balance (in Rs.)	Total expenditure (in Rs)
Baly-Jagachha	—	—
Sankrail	41,764	26,024
Panchla	46,002	19,886
Jagatballavpur	76,716	64,339
Domjur	2,47,867	24,026
Syampur I	67,748	40,525
Syampur II	53,107	42,322
Bagnan I	25,840	8,607
Bagnan II	58,495	54,567
Amta I	91,234	81,443
Amta II	42,604	43,261
Uluberia I	56,490	12,149
Uluberia II	42,364	39,919
Uday Narayanpur	99,762	65,291

Anchal Panchayats

An Anchal Panchayat covers more or less the area of an old-time Union Board and comprises from 8 to 10 contiguous Gram Panchayats. Its members are elected from among the members of the Gram Sabhas in the ratio of 1:250. The members of an Anchal Panchayat, who hold office for 4 years, elect a Pradhan and an Upapradhan from among themselves. Appointed by the State Government but directly responsible to the Pradhan, the Secretary of an Anchal Panchayat is in general charge of its day-to-day business and prepares its budget estimates, annual statement of accounts and an annual statement of the work to be executed next year. Each Anchal Panchayat administers a fund to which are credited contributions made by the State Government as also any tax, toll, fee or rate levied and collected by it under the Act. The following table[2] indicates the number of Anchal Panchayats in each Block of Howrah district and their respective receipts and disbursements during 1965-66.

[1-2] Source: All Block Development Officers of Howrah District.

Name of Block	No. of Anchal Panchayats	Total income excluding opening balance (in Rs.)	Total expenditure (in Rs.)
Baly-Jagachha	—	—	—
Sankrail	15	64,491	52,604
Panchla	11	44,950	39,872
Jagatballavpur	11	66,870	54,843
Domjur	9	57,750	52,792
Syampur I	9	2,91,055	35,242
Syampur II	7	50,037	44,889
Bagnan I	8	40,709	31,143
Bagnan II	7	40,233	37,010
Amta I	12	59,513	44,008
Amta II	14	91,694	88,346
Uluberia I	11	59,780	56,576
Uluberia II	12	82,916	71,709
Uday Narayanpur	11	49,724	56,097

Gram Panchayats

As the executive body of a Gram Sabha covering a specified rural area with a population ranging from 750 to 1,500, each Gram Panchayat consists of not less than 9 and not more than 15 members, including an Adhyaksha and a Upadhyaksha, elected by the members of the Gram Sabha from among themselves. Normally, the members hold office for 4 years. Every Gram Panchayat has a fund to which are credited the sums assigned to it under the provisions of the Panchayat Act as also gifts or contributions received and income from endowments and trusts made in its favour. The table below indicates the number of Gram Panchayats in each Block of Howrah district along with their respective receipts and disbursements during 1965-66.[1]

Name of Block	No. of Gram Panchayats	Total income excluding opening balance (in Rs.)	Total expenditure (in Rs.)
Baly-Jagachha	—	—	—
Sankrail	105	15,515	4,292
Panchla	79	14,195	11,582
Jagatballavpur	91	10,953	7,358
Domjur	63	16,225	7,624

[1] Source: As before.

(contd.)

Name of Block	No. of Gram Panchayats	Total income excluding opening balance (in Rs.)	Total expenditure (in Rs.)
Syampur I	62	18,187	9,787
Syampur II	51	16,383	14,154
Bagnan I	60	11,802	11,802
Bagnan II	51	11,517	11,400
Amta I	74	21,875	12,516
Amta II	80	29,800	25,000
Uluberia I	74	18,067	13,835
Uluberia II	80	31,374	26,144
Uday Narayanpur	67	27,543	13.327

Functions of Panchayati institutions

The functions of Panchayati institutions may be broadly classified into four groups: civic, social, economic and police. The civic duties include village sanitation, public health, water-supply, maintenance of buildings, regulation of transport, collection and disposal of refuse, filling up of unused wells and unsanitary pools, prevention of pollution of water-sources, regulation of slaughter houses and markets, upkeep of village roads and waterways. The social obligations comprise promotion of education and physical culture, construction of recreation grounds, conduct of fairs and festivals, encouragement of folk drama and dancing, establishment of museums, reading rooms, libraries etc. The economic responsibilities consist of supply of agricultural implements and improved seeds to cultivators, improvement of livestock, betterment of cottage industries, introduction of co-operative farming and setting up of co-operative stores etc. The police functions are performed through dafadars and chowkidars whose duties include watch and ward, prevention of crimes and protection of life and property. The number of chowkidars and dafadars under each Anchalik Parishad in the Howrah district and the respective amounts spent on their salaries during 1965-66 are given in the table below.[1]

Name of Anchalik Parishad	No. of chowkidars	No. of dafadars	Amount spent on salaries of chowkidars and dafadars (in Rs.)
Baly-Jagachha	—	—	—
Sankrail	36	10	15,268
Panchla	42	6	16,147

[1] Source: As before.

(*contd.*)

Name of Anchalik Parishad	No. of chowkidars	No. of dafadars	Amount spent on salaries of chowkidars and dafadars (in Rs.)
Jagatballavpur	78	8	27,694
Domjur	52	8	17,316
Syampur I	34	8	9,128
Syampur II	35	6	12,451
Bagnan I	34	7	6,654
Bagnan II	28	7	6,972
Amta I	53	7	9,562
Amta II	43	11	15,790
Uluberia I	53	8	22,560
Uluberia II	37	10	14,499
Uday Narayanpur	41	10	17,155

Although the dafadars and chowkidars are, for all practical purposes, maintained by the Anchal Panchayats, they have been shown, for convenience, against the Anchalik Parishads of which the Anchal Panchayats are constituent members. Half the cost towards their salaries is borne by the Government.

URBAN COMMUNITY DEVELOPMENT

At the instance of the Central Ministry of Health and Family Planning, the Local Self-Government Department of the State Government approved in October 1965 the launching of certain pilot projects in urban community development, one of which in the Salkia area covers Wards No. 5 to 10 of the Howrah municipality having a population of about 93,000 persons. An additional scheme has been in operation since January 1967 in Wards No. 2 to 4 adjoining the Salkia project.

The basic object of the plan is to harness the voluntary endeavours of the people to encourage better citizen-government liaison in developmental work. 50% of the establishment costs are borne by the Central Government while the balance is shared equally by the State Government and Howrah municipality.

A Directorate of Urban Community Development with the Director of Social Welfare functioning as its part-time Director has been set up under the Local Self-Government Department. The day-to-day administration and the implementation of the various programmes is, however, the responsibility of the Project Officer who is assisted by 10 officers having specialized knowledge in health, education, family planning, social education, co-operation, cottage industries and public relations. The Salkia project has at present 2

Extension Educators (Health), 2 Social Education Organizers, an Extension Officer (Industries), an Inspector of Co-operative Societies, 2 Public Relations Officers and 2 Extension Educators (Family Planning). There is a Project Advisory Committee consisting of 12 members headed by the Chairman of the Howrah municipality.

The project aims at popularizing health measures, family planning and family welfare schemes, adult literacy programmes, formation of industrial and consumers' co-operatives, introducing socio-economic projects including those benefiting the old, providing scope for training and employment, encouraging *mahilā samities*, dissemination of information through public relations, organizing milk centres, audio-visual performances and recreational programmes, sinking of tube-wells, construction of roads, improving cleanliness in slum areas etc.

Although a new venture in its experimental stage, the urban community development project at Salkia has already organized 5 adult education centres, 2 *mahilā samities*, 2 youth clubs, 2 libraries and a text-book library for technical students besides arranging a 10-day long exhibition depicting the progress made in India and West Bengal in various fields. On the health front, some 5,000 illiterate people were inoculated against cholera and small-pox; the local Humanities Association was helped to run a charitable dispensary; Milan Sangha, a local club, was assisted to start a charitable homoeopathic dispensary; co-operation was extended to the institutions of Father Andrews and Mother Teressa to eradicate leprosy and a mobile family planning clinic was set up with aid from the Health Department. On the economic front the project has so far been able to set up 2 training-cum-production centres and a co-operative society. No mean achievement this, but public participation still continues to be lukewarm.

OTHER LOCAL SELF-GOVERNING BODIES

Howrah Improvement Trust

Perhaps the earliest step to set up an Improvement Trust for Howrah city was taken on January 31, 1916 when "Mr. Bompas, Chairman, Calcutta Improvement Trust, wrote to Government to extend the Calcutta Improvement Trust Act to Howrah but the Government did not take any step."[1] The matter stalemated for some time but "On the 18th December, 1916 Mr. Bompas approached Government with a view to draw its attention to the question of improvement of the suburban Municipalities in the neighbourhood of Calcutta. Thereupon in March, 1917 Government expressed its desire to obtain the views of the Municipal Commissioners of Howrah on the subject. The Commissioners unanimously resolved on 5th May, 1917 that the provisions of the Calcutta Improvement Act should be extended to the Municipality without further delay. . . .

[1] J. Bonnerjee—Howrah Civic Companion. Howrah, 1955. p. 160.

The Government in their letter dated the 16th July, 1918 stated that the Governor in Council was satisfied that the improvement of Howrah was urgently necessary and was to be carried under the auspices of the Board of Trustees.

"Thereafter the Government made out a scheme in the following way: (1) that Government should contribute a fixed annual subsidy of a lakh of rupees for a period of 20 years, (2) that the Calcutta Improvement Trust should allocate for the improvement of Howrah 1/5th of the receipts from its jute and terminal taxes, the proportion being based upon the relative population of Calcutta and Howrah, (3) that the Howrah Municipality should pay 2 per cent of its income from holdings as its contribution, (4) that a stamp duty of 2 per cent on the transfer of property should be levied in Howrah. . . .

"On account of constant pressure upon the Government for an Improvement Trust, the Government appointed a Committee in 1922 to confer on the matter with three representatives of the municipal commissioners. The conference was held at the instance of Hon'ble Sir Surendra Nath Banerjee on 2nd August, 1922 at Writers' Buildings and it was agreed that a separate Trust should be created for Howrah with the Chairman of the Calcutta Improvement Trust as ex-officio Chairman of the Howrah Improvement Trust. The municipality agreed to contribute Rs. 1½ lakhs per annum. The Secretary, Local Self-Government, Mr. Goode, and the District Magistrate, Mr. Gurner, expressed their view that Howrah should have a share in the terminal tax levied on account of Calcutta Improvement Trust. In 1923, however, the Government informed that the question of improvement of Howrah could not be decided until the question of financing the new Howrah Bridge had been solved."[1]

The proposal was thereafter stalled for quite some years when certain infructuous parleys were held and notes exchanged. "On 1st August, 1935 the Government issued a draft notification authorizing Calcutta Improvement Trust to take up the work of surveying and measurement of the town of Howrah. An informal Committee was also appointed to prepare a scheme for improvement of Howrah at an expenditure of Rs. 1½ crores. . . . On 24th April, 1939 certain provisions of the Calcutta Improvement Trust Act was extended to a very small portion of Howrah for the purpose of an approach road to the new Howrah Bridge. . . . A conference was again held under the presidency of Nawab Bahadur of Dacca, Minister of Local Self-Government on 24th September, 1939 at Darjeeling and it was agreed that there will be five representatives from Howrah on the Board and that Government would initiate legislation for extending the operation of the Calcutta Improvement Trust Act to Howrah at a very early date. . . . In April, 1947 a bill for the improvement of

[1] J. Bonnerjee—op. cit. pp. 161-3.

Howrah was presented by Mohammad Ali, Minister, Local Self-Government and it was passed in the Legislative Assembly with certain modifications. The amended bill was pending for presentation to the Legislative Council but the independence of India came on 15th August, 1947. It was finally shelved as it was thought that the bill should be recast under the new set-up.

"Since then Mr. W. H. Prosser, Chief Engineer, Calcutta Improvement Trust prepared an ambitious development plan for Howrah but on the suggestion of the Chief Minister he prepared another modest plan in 1953. Working on the basis of these plans, Dr. B. N. Dey, Engineering Adviser to the State Government, prepared yet another plan for the improvement of Howrah in 1954. . . . The Government thereafter by a notification dated the 19th March, 1954 appointed a Consultative Committee . . . and by a resolution dated the 12th May, 1954 laid down its terms of reference. . . . The Committee finished their deliberations and submitted a report in March, 1955 with a programme and a master plan for improvement of the city covering eighteen schemes to be executed within 25 years. The estimated cost has been put at Rs. 968 lakhs and the annual income has been put at Rs. 15 lakhs. The balance of Rs. 953 lakhs has been proposed to be recouped by sale of surplus lands and from an yearly contribution of Rs. 8 lakhs. The Committee has suggested a separate Improvement Trust for Howrah with separate administrative organization."[1]

The Howrah Improvement Act (West Bengal Act XIV of 1956) authorized the establishment of the Howrah Improvement Trust which came into being on June 1, 1957. "Conceptually, the Improvement Trust is a developmental, not a municipal, institution. The statute conceives of the Trust as an agency created for the purpose of acquiring land, or undertaking certain specific types of improvements and of releasing the land, with the improvements, to private buyers or to the municipality for continued control and operation. To do this job, the Howrah Improvement Trust is organized as a semi-autonomous agency operated by a Board of part-time Trustees with a full-time Chairman. The municipality has representatives on the Board of Trustees, but otherwise it has no direct authority over the Improvement Trust which is responsible only to the State Government through the Department of Local Self-Government."[2]

At present the jurisdiction of the Trust is conterminous with the limits of the Howrah municipality but the Act provides for its extension to any specific area in the neighbourhood. In view of the fact that the Howrah Planning Area is a well-knit integral part of the

[1] op. cit. pp. 164-67. For almost an analogous account of the historical background of the Howrah Improvement Trust, see Bejoy Krishna Bhattacharya—Municipal Administration in Bengal, Part I. Calcutta, 1936. pp. 189-203.

[2] Administration Report on the Operations of the Howrah Improvement Trust: 1957-58 to 1965-66, Appendix I. Howrah, 1966. p. 1.

Calcutta Metropolitan Planning Area, it is most likely that in the near future the present jurisdiction of the Trust will have to be extended to cover a larger tract "bounded on the east by the Hooghly river from Bally Bridge in the north to the Saraswati river in the south, and which extends on the north up to the Durgapur Expressway and on the west up to the National Highway No. 6 to the Saraswati river."[1] This area has been divided into two sectors—urbanized and urbanizing. "In the urbanized area, the programme would include steps to stop deterioration of the situation; to develop a framework of a tenable roads system, sewerage lines, water supply and drainage; to open parks and other community facilities; and also to undertake a programme of housing and urban renewal commensurate with the financial resources available. The industrial and economic base has to be strengthened and environmental improvement programmes carried out in a concerted drive so that Howrah in our time may become 'a good place to live and work'. In the urbanizing area, on the other hand, we are to lay down corridors of development, apply land-use controls to direct development towards the desired direction, prevent haphazard growth, and build up an infrastructure of social overheads in accordance with the Master Plan of land use."[2]

Constituted on June 1, 1957,[3] the "Board consists of 10 Trustees, besides the Chairman who is appointed by the State Government. Of the Trustees, four (including the Civic Chairman, *ex officio*) represent the Howrah Municipality, two are elected by the Chambers of Commerce on a rotation basis and four are nominated by the State Government. . . . The percentage of attendance during 1965-66 was 69.7."[4]

During the same year seven Committees were functioning under the Board, the details of whose activities are enumerated below:[5]

Name of Committee	Functions	No. of meetings held in 1965-66
Land Committee	To deal with exemption cases, sale and disposal of land and betterment levy	2
Objection Committee	To consider objections and representations in respect of the schemes published and alignments declared by the Trust	21
Selection Committee (Engineering Staff)	To interview and select candidates for appointment of technical personnel in Engineering and Valuation Departments	11

(*contd.*)

[1] op. cit. Appendix II. p. XI.
[2] op. cit., loc. cit.
[3] *Vide*, L. S. G. Department Notification No. 3607-8/M. 2A-10/57 dated 29.5.57.
[4] op. cit. p. 11.
[5] Ibid. pp. 12-3.

Name of Committee	Functions	No. of meetings held in 1965-66
Selection Committee (Non-Engineering Staff)	To interview and select candidates for other posts	3
Rules Committee	To consider draft Rules and recommend the same to the Board for approval	2
Special Committee	To authorize the Chairman to take all necessary steps to expedite the framing of schemes and execution thereof, and to dispose of all such urgent matters as are brought up by the Chairman	6
Works and Estimates Committee	To consider and dispose of matter relating to sections 22 and 24 of the Howrah Improvement Act 1956, i.e. sanction of estimates and acceptance of tenders.	5

The last two Committees have been delegated full powers of the Board, while the rest have only recommendatory powers.

In 1965-66 the Trust had three Departments in all, namely the General & Accounts Department, the Engineering Department and the Valuation Department. The General & Accounts Department was headed by the Secretary-cum-Chief Accountant who had under him an Accountant, 20 clerical and 15 lower-grade staff. The Engineering Department was under a Chief Engineer who was helped by an Architect, 3 Executive Engineers, 7 Assistant Engineers and a Statistician, besides 11 clerical, 58 technical and 19 lower-grade staff. The Chief Valuer assisted by 3 Assistant Valuers, 40 clerical, 71 technical and 39 lower-grade staff looked after the Valuation Department. The total establishment costs amounted to Rs. 5,76,583 for 1965-66.

"The first few years", in the words of the Chairman of the Trust,[1] "were spent on preliminary organization, in the preparation of schemes and in initiating land acquisition proceeding." That the work has since considerably increased will be evident from the table below.[2]

Year	Expenditure on Land Acquisition (Rs.)	Engineering Work Orders Issued (Rs.)	Expenditure on Engineering Works & Stores (Rs.)
1961-62	—	442	23,000
1962-63	5,52,000	7.41,000	93,000
1963-64	22,70,000	55,000	5,10,000
1964-65	25,46,000	10,43,000	5,18,000
1965-66	54,35,000	81,27,000	25,13,000

[1] Foreward to the Administration Report on the Operation of the Howrah Improvement Trust: 1957-58 to 1965-66. Howrah, 1966.
[2] ibid. p. 40.

In physical terms, the major works completed so far are the construction of a number of parks and the storm sewer at Salkia while the major works taken in hand include the construction of sewerage, arterial roads, parks and housing colonies for the entire city. The following table[1] gives details of all phased schemes of the Howrah Improvement Trust.

SCHEMES TAKEN UP BY THE HOWRAH IMPROVEMENT TRUST

Description of Schemes	Government Sanction: Notification No. & Date	Land Area (Acres)	Total Estimated Costs (Rs.)
General Improvement Scheme I (Kadamtala area between Howrah Drainage Canal land on the south of Makardah Road and Narasingha Dutta Road near Kadamtala railway station), providing for a 100′ wide road, 40′ wide subsidiary roads and parks, building sites, housing etc.	1651/M3H-12/60 dated 3.3.61 1220/M3H-23/64 dated 3.4.65	42.10	46,00,000 49,57,544
General Improvement Scheme II (Baruipara Doomra *Jalā* area south of Ichapur Road to Mahendra Bhattacharjee Road), providing for 80′ wide road, 40′ wide subsidiary roads, building sites, housing, polytechnic etc.	3838/M3H-12/61 dated 7.6.62 1226/M3H-24/64 dated 3.4.65	56.80	53,25,000 12,24,000
General Improvement Scheme III providing for 9 small parks	3649/M3H-15/61 dated 25.5.62	18.66	17,39,000
General Improvement Scheme IV (Narasingha Dutta Road Park), providing for a large park and playground at Narasingha Dutta Road	5217/M3H-6/62 dated 22.8.62	8.31	8,94,700
General Improvement Scheme V providing for a central park on vacant land within the enclave of Mahendra Bhattacharjee Road and Dr. Sarat Chatterjee Road.	1082/M3H-10/65 dated 16.1.64	56.00	19,80,000
General Improvement Scheme VI providing for a large park (Salkia Park) on a vacant land north of Jaiswal Hospital on G.T. Road	2012/M3H-11/63 dated 9.5.64	16.33	11,87,800
General Improvement Scheme VII (Salkia Storm Water Drainage Scheme), providing storm water sewers along Naskarpara Road	1786/M3H-1/61 dated 27.10.61	0.23	11,65,000
Sewage Disposal Scheme I providing for sewage treatment and disposal plant in Santragachi area	950/MIL-3/64 dated 24.3.64	190.14 3.54	83,37,000 1,44,600

(*contd.*)

[1] op. cit. pp. 66-67.

SCHEMES TAKEN UP BY THE HOWRAH IMPROVEMENT TRUST—*contd.*

Description of Schemes	Government Sanction: Notification No. & Date	Land Area (Acres)	Total Estimated Costs (Rs.)
Sewage Disposal Scheme II providing for sewerage for part of Howrah	879/M3H-30/64 dated 19.3.65	—	1,70,00,000
General Improvement Scheme VIII (Howrah Drainage Canal Land Improvement Scheme), providing for a peripheral road (north to south) along Howrah drainage canal land from Madhusudan Pal Chowdhury Lane to Dr. Sarat Chatterjee Road	29/M3H-29/64 dated 5.1.65	—	93,79,000
General Improvement Scheme IX providing for a bus stand at Kadamtala close to the eastern end of the Improvement Scheme No. I	9362/M3H-12/62 dated 20.12.62	1.32	21,42,000
Improvement Scheme X providing mainly for a portion of a link between Kadamtala and G.T. Road by a 120′ wide road	2260/M3H-2/65 dated 13.5.65	18.23	40,05,000
General Improvement Scheme XI providing a road over an overbridge on the railway storeyard to be used as G.T. Road by-pass	7012/M3H-3/65 dated 4.11.65	12.10	1,12,46,000
General Improvement Scheme XII [between Belilious Lane and G. T. Road (South) in continuation of General Improvement Schemes Nos. I and X]	2091/M3H-4/66 dated 6.5.66	17.24	66,34,000
General Improvement Scheme No. XIII (between Natabar Pal Road on the east and Howrah Drainage Canal land on the west) providing communications, road link to Scheme I, housing plots, sewerage facilities etc.	—	37.20	72,36,900
General Improvement Scheme XIV (between Mahendra Bhattacharjee Road on the north and Improvement Scheme No. V on the south), providing for communications, road link to Schemes Nos. II and V, housing plots, building sites, sewerage facilities etc.	—	34.24	67,47,000
General Improvement Scheme XV (south of Belilious Road between Tikiapara on the west and Belilious Road on the east) for creating and improving means of communication, housing sites, sewerage facilities etc.	—	9.90	44,33,000

(*contd.*)

SCHEMES TAKEN UP BY THE HOWRAH IMPROVEMENT TRUST—*contd.*

Description of Schemes	Government Sanction: Notification No. & Date	Land Area (Acres)	Total Estimated Costs (Rs.)
General Improvement Scheme No. XVI in the Suburban Park Road area	—	1.10	4,51,000
General Improvement Scheme No. XVII for Uma Charan Basu Lane Park	—	3.43	11,90,000
General Improvement Scheme No. XVIII in the Seal's Garden Area	—	13.52	49,85,000
Doomra *Jalā* Excavation Project (East of Scheme II)	6830/M3H-21/63 dated 11.11.63	35.15	39,40,333
H.I.T. Building	143/MIL-49/65 dated 18.1.66 and 4315/MIL-49/65 dated 13.7.65	0.46	29,00,000
General Improvement Scheme No. XIX in Ichapur Road area between General Improvement Scheme I on the north and General Improvement Scheme II on the south	—	21.4	80,70,000
General Improvement Scheme No. XX in Kajipara area with Mollapara Lane on the north and G. T. Road (south) on the south	—	31.4	1,15,99,000
General Improvement Scheme No. XXI between Mollapara Lane and Sibpur Road	—	—	1,02,85,400
General Improvement Scheme No. XXII for a stadium in the General Improvement Scheme V area	—	—	2,02,34,000
General Improvement Scheme No. XXIII for shop-cum-housing in the northern portion of Improvement Scheme IX area	—	—	19,00,000
Housing Accommodation Scheme No. 1 in the northern portion of General Improvement Scheme II area	—	—	45,00,000

About the projects undertaken by the Howrah Improvement Trust, the Calcutta Metropolitan Planning Organization (whose area of survey and planning covers that under the H.I.T.) has observed: "The present projects of the HIT can be grouped into four main programmes, to be taken up during the next eleven years: (1) the drainage canal road schemes; (2) the east-west road schemes; (3)

the north-south road schemes; and (4) the Central Business District (CBD) schemes. Work has progressed the farthest on the drainage canal road schemes, so they logically have the first priority. However, the real benefits of this total project area cannot be realized until the east-west road is complete, thereby providing access to the heart of the city and to Calcutta. Therefore, the east-west road should be the second priority and should be completed before new schemes are taken up along the drainage canal road. The east-west road is also a pre-requisite to the successful development of the north-south road along with the completion of the new bridge and the bridge connector road to NH 6. Since these facilities will not be completed until the early 1970's, it has been given third priority. The fourth priority has been assigned to the CBD renewal programme. It is estimated that this project offers the highest potential payback to the Trust for the initial investment. To a large extent, it is dependent on the completion of the new Buckland Bridge which is proposed for the Fourth Five-Year Plan. The railways will be responsible for the building of the actual bridge span, but HIT will build the approaches."[1]

The following two tables[2] indicate the income and expenditure (actuals) of the Trust on capital and revenue accounts for the year 1965-66.

TABLE—I

Particulars	Income on Capital Account (Rs.)	Particulars	Expenditure on Capital Account (Rs.)
Under Sec. 132(d): Sale of movable property	11,313	Under Sec. 133(a): framing and execution of improvement schemes	20,07,300
Lump sum grant and subsidy from various Departments of State Government	24,40,000	Under Sec. 133(b): Cost of acquiring land as per Schedule I	54,35,668
Subsidy for slum clearance	1,25,000	Under Sec. 133(c): Cost of office accommodation & construction of store and garage	1,96,325
Loan for arterial sewage	30,00,000	Under Sec. 133(e)	25,386
G. T. Road By-pass	10,00,000		
Slum clearance	75,000		
Receipt from Education Department (for Polytechnic)	8,00,000		
Total	74,51,313		76,64,679

[1] op. cit. Appendix I. p. VI.
[2] ibid. pp. 60-61.

TABLE—II

Particulars	Income on Revenue Account (Rs.)	Particulars	Expenditure on Revenue Account (Rs.)
Under Secs. 134(b) & 92: Duty on transfer of immovable property	1,84,784	Under Sec. 130(I) (a): Chairman's salary and allowances	567
Under Sec. 94: Customs duty on export of jute	4,15,960	Under Sec. 130(I) (b): Fees for meetings	3,920
Under Secs. 134(c) & 95: Municipal contribution—current and arrear	6,56,513	Under Sec. 130(I) (c): Remuneration of employees as per Schedule II	4,42,922
Under Sec. 134(f). Rents etc. of land vested in the Board	54	Under Sec. 130(I) (e): Payments to tribunal U/s. 75 and 155	150
Under Sec. 134(g). All other receipts	5,53,837	Under Sec. 130(I) (f): Office expenses as per Schedule III	1,33,662
Sales of tender forms	1,210		
Interest	3,23,655		
Sale of plans, particulars of schemes etc.	1,026		
Total	21,37,039		5,81,221

CHAPTER XIII

EDUCATION AND CULTURE

HISTORICAL BACKGROUND

Historical evidence about the existence of educational institutions in the district during the Hindu period is singularly lacking. From the scarce and indirect testimony of the existence of some scholars and their works in remote times we can broadly guess about the presence of certain seats of learning here. We do not have any definite information about educational and cultural institutions in the district during the Turko-Afghan period either, such as we find in the neighbouring Hooghly district. It is only during later Mughal rule that the mists are cleared enabling us to see things in a better perspective.

Pargana Bhursuṭ

Myths, legends and traditions current in Bengal hold that there was a kingdom known by the name of Bhuriśresṭha or Bhuriśresṭhi or Bhuriśrisṭi ('Bhursuṭ' in popular and simpler epithet) in ancient times which continued to exist right up to the beginning of East India Company's rule and which has been mentioned in the late Mughal rent rolls as Pergunnah Bhursuṭ (Mahal Bhursaṭ in Sarkār Sulaimānābād according to *Āin-i-Ākbari*). It encompassed a large tract comprising the present police stations of Uday Narayanpur and Amta in Howrah and Jangipara in Hooghly district. Within this tract are still to be seen two villages bearing the names Par Bhursuṭ (in P.S. Jangipara of Hooghly district) and Dihi Bhursuṭ (in P.S. Uday Narayanpur of Howrah district). In one of them lived in the 10th century A.D. the famous logician Śrīdharāchārya, the author of *Nyāyakandali*. According to Dineshchandra Bhattacharya, Śrīdhara was a disciple of Kumārilla Bhaṭṭa and was proficient in 'Sarvatattva' or the six principal schools of philosophy, which he taught with equal facility to the students at his *chatuspāṭhi*. His grandfather, a Rāḍhiya Brahmin of the Bandya sept, was also a scholar and lived in the same village. Bhuriśresṭhi, according to Śrīdharāchārya himself, was a part of Dakshina-Rāḍha, and was within the domain of a Kayastha king named Pāṇḍudāsa who was Śrīdharāchārya's patron. Pāṇḍudāsa was evidently a feudatory king but it is not known whether he acknowledged the suzereinty of the Pālas or the Kambojas of Dandabhukti or the Sūras of Apāra-Mandāra.[1] It is, however, certain from the evidence of Śrīdharāchārya that from about the 9th century A.D., this principality became the seat of a local power with a large number of Bhurikarma-Brahmins

[1] Benoy Ghosh—*Paschim Banger Samskriti*. Calcutta, 1957, pp. 573-6.

and bankers or *śresthis* living there. It is presumable on these various grounds, that from the time of Śrīdharāchārya's grandfather Bṛihaspati (*circa* A.D. 870) to the time of Śrīdhara himself, there grew up a tradition of learning at Bhursuṭ.

Probably during the reign of Alauddin Husain Shah (1493-1519) there was a local Mukhoti Brahmin named Chaturanan Mahaneuki, whose descendants continued to rule over the Bhursuṭ Pargana from their seat at Garh-Bhabanipur till the time of Akbar. One Kṛishna Roy,[1] a chieftain of this family, was a contemporary of the Great Mughal. Pratāpanārāyana, who ruled from about A.D. 1652 to A.D. 1685, was known to be a patron of learning. One Bharatamallika of the Vaidya caste, the famous author of the medical treatises *Chandraprabhā* (*circa* A.D. 1676) and *Ratnaprabhā* (*circa* A.D. 1680), was his court-scholar.[2]

In 1676 Kirtichandra, Raja of Burdwan, invaded the Bhursuṭ Pargana and annexed the territories. During its days of decline Bhursuṭ produced her finest man of letters since Śrīdharāchārya, namely Bhāratchandra Rāyguṇākar of *Annadāmaṅgal* fame. Bhāratchandra Rāy, son of Narendranārāyañ Rāy and Bhavāni Devi, of the Mukherjee-Brahmin Raj family of Bhursuṭ was probably born in the year 1119 B.S. or A.D. 1712 in the village of Pero Harispur (J.L. No. 166, P.S. Uday Narayanpur), one of the three seats of the family. He left his ancestral home in early age and went to Devanandapur (in Hooghly), where he picked up proficiency in Sanskrit and Persian. He then returned to his native village and began to look after the family property. While on a private errand to Burdwan he was arrested by Kirtichandra, the Raja of Burdwan, but escaped from the prison and went to Orissa. There he came in contact with a band of *Vairāgis* and was converted to Vaishnavism. After some time he came back to his village again which he left after a short while in search of a job. He arrived at Chandernagore (Hooghly), where Indranarayan Chaudhuri, the Dewan under the French administration, offered him shelter. Raja Krishnachandra Ray of Nadia, a friend of Indranarayan, was greatly impressed by his poetic talents and appointed him as his court-poet. Krishnachandra settled him with a piece of rent-free land in Mulajore (on the eastern bank of the Bhagirathi in the Barrackpore subdivision of 24-Parganas) where Bhāratchandra breathed his last in 1167 B.S. (A.D. 1760) at the age of 48.[3]

Bhāratchandra's poetic faculties first found expression in two short *pāchāli* poems invokating Satyanarayan. *Annadāmaṅgal*, his *magnum opus*, was composed at the request of Raja Krishnachandra

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[1] ibid., loc. cit.
[2] ibid. p. 579.
[3] Sukumar Sen—*Bāṅgālā Sāhityer Itihās*, Vol. I, part II. Calcutta, 1963. pp. 475-6.

Ray of Nadia in A.D. 1752. In *Annadāmangal* Bhāratchandra revealed himself to be a very urban and sophisticated poet with a strong command over his craft. He successfully assimilated the influence of Sanskrit, Persian and Hindi literatures. He also tried his hand in composing a verse-play on *Chandi*, the manuscript of which has been found in an incomplete form at Khurut in Howrah town. Bhāratchandra translated *Nāyakanāyikālakshmana* of the Maithili poet Bhanudatta under the title *Rasamanjari*, which he possibly finished in A.D. 1749. He also wrote a few short poems in Sanskrit.

In the 18th century a number of long narrative poems came to be written by Muslim poets of Bengal which drew their story elements from Persian and Hindusthani folk tales, myths and legends but were usually adapted to suit the taste of the local Muslim society. The language used, though basically Bengali, showed strong regional and dialectal influxes with a good sprinkling of Arabic, Persian and Hindusthani words and idioms. The themes were invariably woven around incidents of love, passion and sex and form, what is known as *Mussalmāni Kissā Sāhitya*. Among the regions where such literature flourished, Bhursuṭ can claim a place of distinction. From about the middle of the 18th century to about the end of the 19th century several Muslim poets from the Bhursuṭ Pargana and the neighbouring Mandaran region enriched the *Mussalmāni Kissā Sāhitya* of Bengal of whom one of the earliest was one Garibulla who was born in the village of Hafezpur in Bhursuṭ Pargana. He was probably alive between the fourth and the eighth decades of the 18th century. He wrote the first part of the long poem *Āmeer Hāmzā* and composed another long poem based on the famous Persian legend of *Yusuf-Zulekhā*, which also bears the same title and carries the sub-title of *Muhabbatnāmā*. He possibly also composed a book titled *Jangnāmā* following the story in a book of identical title by Hanifa. The most important of these poets was Saiyed Hamza who came from the village Udna or Aduna in Bhursuṭ Pargana. He, however, left his ancestral place in 1198 (1199 ?) B.S. (A.D. 1791/92) owing to successive floods in the area. It is not known when Hamza composed his *Manohar Madhumālati*, the story of which was drawn from the legend of the same name current in Hindusthani literature. His *magnum opus*, the second part of *Āmeer Hāmzā*, was written between 1199 and 1201 B.S. (A.D. 1792-95). Hamza finished the composition of *Jaiguner Pūthi* in 1204 B.S. (A.D. 1797) and *Hātemtāi* in 1210 B.S. (A.D. 1804).[1]

Hundreds of old palm-leaf and paper manuscripts of books on *Vyākaraṇa* (grammar), *nyāya* (logic), *smriti* (law), *vedānta* (Upanishadic philosophy), *alaṁkāra* (poetics), *āyurveda* (medicine), *jyotisha*

[1] Sukumar Sen—op. cit. pp. 527-28.

(astrology) and *kāvya* (poetry) etc. are still lying with traditional Brahmin *paṇḍit* (scholar) families in the villages of Dihi Bhursuṭ, Pero Harispur, Basantapur, Garh-Bhabanipur and Dogachhia in the Bhursuṭ Pargana. Two schools, the *Basantapur Chatuspāṭhi* at the village Basantapur and *Rāmpur Mahāmāyā Chatuspāṭhi* at the village Rampur (both within P.S. Uday Narayanpur) are now the only two seats of Sanskritic studies keeping up the ancient tradition. Both these institutions are recognized by the Vaṅgiya Saṁskrita Sikshā Parishad and receive annual grants-in-aid from the Howrah Zilla Parishad.

Raspur

The village Raspur (P.S. Uday Narayanpur) has a three to four hundred year old tradition of being a seat of learning. The Dakshin Rāḍhiya Kayastha Ray family of the Raypara locality of the village has been mainly responsible for upholding this tradition. To this family belonged the poet Ramakrishna Ray, the author of *Sivāyana*, who frequently designated himself as Kavichandra or Kavichandra-dāsa at the end of his poems. The dates of his birth and death or the time when he wrote *Sivāyana* are highly conjectural. The earliest known manuscript copy of this work bears the date of 11th *Srāvaṇa*, 1091 B.S. (A.D. 1684).[1] Benoy Ghosh, however, thinks that Kavi-chandra Ramakrishna was born around the first two decades of the 17th century and completed composing his *Sivāyana* between A.D. 1635 and 1640.[2]

Jhorhat

Jhorhat in Sankrail police station seems to have been another centre of learning in the late medieval period. At least one important manuscript has been discovered from this village. Harideva or Dwija Harideva, as the poet describes himself, was a Rāḍhiya Brahmin born in this village the dates of whose birth and demise are not precisely known. It is presumed that he commenced the writing of *Rāymaṅgal* (an eulogistic narrative poem on Dakshin Ray--the tiger-god) in 1128 B.S. (A.D. 1721) and completed it in 1131 B.S. (A.D. 1724). The original manuscript of this book has been found from the village.[3] Dwija Harideva also composed a narrative poem on Devi Sitalā, entitled the *Sitalāmaṅgal*. The earliest known manus-cript copy of this book (not the original MS) is about 150 years old. All that now remains of the old tradition of the village as a seat of learning is a solitary *ṭôl* eking out its existence somehow.

Khurut

Khurut, an old village now in the heart of Howrah city, seems to have been an important seat of learning and culture in the late medieval period. A large number of manuscript copies of earlier books discovered from the vicinity bear the name of Khurut alongside the names of the copyists. One of them is a copy of *Panchānanmaṅgal*

[1] Sukumar Sen—op. cit. pp. 315-16.
[2] Benoy Ghosh—loc. cit.
[3] Panchanan Mandal Ed.—*Sāhitya Prakāshikā*, Vol. 4. Santiniketan, 1366 B.S. & *Puthi Parichaya*, Vol. 2. Santiniketan, 1958. pp. 340-42.

by Dwija Raghunandan wherein the name of the copyist is given as Ramākānta Paṇḍit and the date as 1202 B.S. (A.D. 1795). Ramākānta Paṇḍit also copied out the *Lakshmimaṅgal* of Dwija Narottam in the same year. A copy of *Sivāyana* or *Sivasaṁkirtaṇa* or *Haramaṅgala* of Rameswar Bhattacharya, bearing B.S. 1223 (A.D. 1816) as the year of the completion of the copy was also found from Khurut and the copyist concerned declared himself as a resident of Khurut for three generations.[1]

Among other places which have yielded manuscript copies of old books mention may be made of Pāchpārā in Sibpur police station. A manuscript of *Lakshmir Bratakathā* written in 1137 B.S. on A.D. 1730 by one Prānaballabh, a resident of the village, was discovered here.[2] Jādav Paṇdit or Jadunāth, who composed a minor *Dharmamaṅgal* poem in 1147 B.S. (A.D. 1740) was probably a resident of Domjur.[3]

Baly and Belur

Baly and Belur (P.S. Baly) are supposed to have been important seats of Sanskritic studies. The history of the *Bāly Vidyāsamāj* can be traced back to the Mughal period. There were several families given to scholarly pursuits in these two villages of which the Bhaṭṭāchāryas were one. 'Bāghā' Pragalbha Bhaṭṭāchārya, the famous logician of the *Navyanyāya* school, was a revered *guru* of the *Bāly Vidyāsamāj*. His son Gopāl Tarkālaṁkār married the daughter of Kamalnārāyan Tarkapanchānan, the court-scholar of Rājā Pratāpāditya (a contemporary of Akbar and Jehangir) of Jessore. His son Rāmnāth Bhattācharya emigrated to Jessore. Another erudite family was the Chaitāl-Chaṭṭos which produced the noted scholar Chandrasekhar Vidyālaṁkār. His son Rāmchandra Tarkālaṁkār too was a renowned teacher of *Navyanyāya*. His son Rāmbhadra Nyāyālaṁkār received from Emperor Aurangzib extensive *Brahmottar* land grants in the village Chak-Baly and the family has since been known as Chakbhaṭṭāchāryas. The Ghosal family is, however, regarded as the most erudite of all and it traces its origin from one Rājendra, who had two learned sons, Rāmakrishna and Jādavendra. For about four or five generations from Rāmakrishṇa and Jādavendra, the family produced many reputed scholars and *gurus* of whom Rāmasankar Tarkapanchānan, the logician was the most famous. He reached the pinnacle of his fame between 1165 and 1204 B.S. (A.D. 1758-97). His *chatuspāṭhi* was situated in the Byājgirdāṅgā locality of Baly. His sons, Rāmlochan Vidyāvāchaspati, Rāmdhon Nyāyālaṁkār and others were also noted scholars. The last of the great scholars of this family was Rāmasundar Nyāyabhusan. In the neighbouring village of Belur several *ṭōls* and *chatuspāṭhis* started func-

[1] Panchanan Mandal Ed.—*Pūthi Parichaya*, Vol. 1. Santiniketan, 1358 B.S. pp. 219-27 & *Pūthi Parichaya*, Vol. 2. Santiniketan, 1958. pp. 386-87.
[2] ibid. (Vol. I) p. 225.
[3] ibid. (Vol. I) p. 221.

tioning since about the closing decades of the 17th century. Durgāprasād Siddhāntabāgis and Krishnaprasād Vidyāsāgar, who flourished during the early part of the 19th century, were the most renowned scholar-gurus of Belur. Rāmjaya Bhattacharya Siromoni (born in A.D. 1796 at Sikhara), who set-up a *chatuspāṭhi* at Baly, was a pupil of Durgāprasād Siddhāntabāgis.[1]

Narit

Narit, a village in Amta P.S., has a two and a half century old tradition of being a seat of Sanskrit learning. Around A.D. 1715-25, Gourikanta Bandyopadhyaya emigrated to Narit from Seakhala in Hooghly district. There were already some *ṭôls* in the village when Gourikanta started a *chatuspāṭhi* of his own. His descendants kept up the tradition till about the third decade of the present century. Thereafter, since there was a dearth of scholars in the family, other unrelated gurus came to run the Nyayaratna *Chatuspāṭhi* of Narit which is very much alive to-day and is recognized for higher Sanskrit studies and receives government aid through the Zilla Parishad. Mahamahopadhyaya Maheschandra Nyayaratna of the Bandyopadhyaya family was the most renowned scholar of Narit. The exact year of his birth is not known. After qualifying himself from the Narit *Chatuspāṭhi* in *nyāya* (logic), *darsana* (philosophy) and *alaṁkāra* (rhetoric) in 1886 he became an Assistant Professor of Sanskrit College, Calcutta. Then, he acted, in succession, as the Professor of *Alaṁkāra* (rhetoric), Professor of Hindu Philosophy, Professor of *Vyākaraṇa* (grammar)[2] and finally in 1877 he became the Principal of the College.[3] Eearly in 1895 he retired from service. He wrote a commentary on the *Kusumāñjali*, edited the *Krishna Yajurveda*, the *Pūrva-Mimāṁsā* and the *Kāvya-Prakāsa* with learned commentaries. Among his other works were *Remarks on Dayānanda Sarasvati's Veda Bhāṣya, Tulsi-dhāraṇā Mimāṁsā, Authorship of Mrichchhakaṭika, Lupta Saṁbatsara Mimāṁsā, Prākrita Kathā, Reform of the Hindu Almanac* and *Brief Notes on the Modern Nyāya System of Philosophy and its Technical Terms.*

The other known seats of higher Sanskrit studies in the district are Patihal in Jagatballavpur P.S., Ramrajatala, within the municipal limits of Howrah city, Makardah in Domjur P.S. and Baltikuri in Jagachha P.S. But none of them can perhaps claim a tradition older than the first decade of the 18th century. *Chatuspāṭhis* still exist at these villages. Of them the Baltikuri Sadananda *Chatuspāṭhi*, Ramrajatala Sankaracharya *Chatuspāṭhi*, Patihal *Chatuspāṭhi* and Makardah *Chatuspāṭhi* are recognized by the Vangiya Sans-

[1] Dineshchandra Bhattacharya—*Bāngāleer Sāraswat Avadān*, Vol. 1. Calcutta, 1358 B. S. pp. 299-300.

[2] A Summary of the Public Carreer of Mahamahopadhyaya Maheschandra Nyayaratna. C. I. E. Calcutta, 1896; Gopikamohan Bhattacharya—*Saṁskrita Koleger Itihās*, Vol. II. Calcutta, 1961. pp. 35-60.

[3] Department of Education, Bengal Notification No. 691 of the 19th February, 1895.

krit Siksha-Parishad and receive grants-in-aid from the State Government.

Writing about the Sanskrit schools within Howrah town, C. N. Banerjei observed in 1872: "Such an institution (*tol*) was established about the year 1800 A.D. in Santragachi by a man named Gouri Kanta Bhattacharjea. Strictly speaking Gouri Kanta merely extended the benefits of the institution, which had been founded by his father some thirty years ago. The institution flourished up to 1860 when it began to decline, owing to want of charities which supported it. A kindred institution is to be found in Bamoongachi, the proprietors of which are the well known Siromonis. The present college is of about forty years standing. At Baboodangah, there is a similar institution . . . Both these colleges are now on the decline.[1]

"The Acharjees (Sakadwipi Brahmins) of Baly, who settled in Chakraberia in the west-central part of the city (Howrah) towards the middle of the 18th century, were well versed in astrology--whether they maintained any school of astrology is not known."[2]

We have no definite information about the existence of *maktabs* or *madrasahs* (lower or higher schools respectively of Islamic learning) in the district of Howrah. But it seems that during the late medieval period there were some *maktabs* in the Bhursuṭ Pargana and a relatively well-known one in Sankrail, near the mosque of Těke Pīr. There might also have been a *maktab* close to the mosque of Jangalbilas at the village of Baniban in Uluberia P.S

Early days of modern education

The first school in the district for imparting modern western education was the Bengal Military Orphan Asylum, an institution for the primary education of orphans of the soldiers of the Bengal Army, which was established in A.D. 1782.[3] It was originally located at Dakshineswar from where in 1785 it was transferred to Levett's house at Howrah, a site now occupied by the district courts. The school used to be managed by a committee and received from Government an allowance of Rs. 3 (subsequently raised to Rs. 5) for each of the 500 orphans looked after by it.[4] From an advertisement in the Calcutta Gazette of 1807 we find that "the girls were taught, among other accomplishments, embroidery or chicundoz work."[5]

"The Baptist Missionary Society commenced its operations (in the district) in 1793 A.D. under the Serampore Missionaries and had one school for Native boys and one for Native girls. In 1830, they

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[1] C. N Banerjei--An Account of Howrah, Past and Present. Calcutta, 1872. p. 52.

[2] Amiya Bhusan Chatterjee—Cultural Districts of Howrah City, in Geographical Review of India, Vol. XXVI, No. 1. Calcutta, March, 1964

[3] L. S. S. O'Malley & Monmohan Chakravarti--op. cit. p. 140; C. N. Banerjei —An Account of Howrah, Past and Present. Calcutta, 1872. p. 52—gives the name of the school as Lower Orphan School.

[4] O'Malley and Chakravarti—loc. cit.; C. N. Banerjei—loc. cit.—says that the school was directly managed by the Government.

[5] H. B. Hyde—Parochial Annals of Bengal. Calcutta. pp. 246-52.

established a school for Native non-Christian and Christian boys. . . ."[1] These schools were Bengali-medium 'monitorial' schools designed to cater for primary education.

In 1821 Statham, the first Baptist missionary resident at Howrah, opened a boarding school in the town which had to be closed down after 6 years. In 1824 the Missionaries opened one vernacular school in Sibpur and in 1827 the same people started another similar institution in Bantra, both within Howrah city.[2] In 1842 another Baptist missionary, T. Morgan, established a free school, possibly at Ghusuri, which too was closed down after 16 years. Both this and Statham's school were meant for European and Anglo-Indian boys exclusively.

On July 11, 1838, Srimanmaharaja Rajnarayan Bahadur, the zemindar of Andul in Sankrail police station, called a meeting of important people of Andul and neighbouring villages to seek ways and means to establish a school to teach Sanskrit, English and western sciences through the medium of English. It was decided that the school should be named the Andul Academy and that the education in English should be imparted by an English man and in Sanskrit by Sanskrit scholars.[3]

On November 16, 1845, the District Magistrate of Howrah received 190 petitions from Hindu parents for opening a Government school in Howrah town, which was started on December 1, 1845 with his active support. The committee of management consisted of Horo Chunder Chowdhury and Raj Coomar Banerjea, besides three European officials. Presumably, the committee ceased to function for in 1860 we find the Commissioner of Burdwan Division complaining about the non-existence of a managing committee which led to its immediate reconstitution. The school house was built in 1847 on a 2½ *bighā* plot of land near the Howrah Maidan. In 1858 the first batch of students was sent up for the Entrance Examination of the University of Calcutta, founded in the previous year. This institution, named later as the Howrah Zilla School is now jointly maintained by the Howrah Municipality and the Zilla Parishad and is still in existence.

The Sulkea Aided Anglo-Vernacular School, later renamed the Salkia A. S. School, owes its origin to the philanthropy and public spirit of late Baboo Khettra Mohan Mitter, a mukhtear of the Howrah District Bar. It was established at Murgihata in January 1855 for imparting education to the boys of the locality. In 1856 a separate Vernacular Department was added to the institution and in 1857 a grant of Rs. 87 a month was obtained from the Government. The school was removed to Chowrasta in Salkia and sent up students

[1] C. N. Banerjei—op. cit. p. 53.
[2] Amiya Bhusan Chatterjee—Cultural Districts of Howrah City in Geographical Review of India, Vol. XXVI, No. 1 Calcutta, March, 1964.
[3] Brajendranath Bandyopadhyaya (Ed.)—*Sambād Patrey Sekāler Kathā*, Vol. II. Calcutta, 1356 B.S. (3rd. Edn.), pp. 69-71.

for the Entrance Examination of the University of Calcutta for the first time in 1859. A number of private schools opened about the same time in the vicinity closed their doors after short spells of existence.

A vernacular school for boys was established with Government aid at Santragachi in 1857. In 1864 the thatched house in which it was located was destroyed by a cyclone and the school was removed to the premises of its founder Baboo Kedar Nath Bhuttacharjea, where it continued for 2 years. It then moved on to its own house and in 1870 got amalgamated with an English school opened in this same year. Howrah Ripon Collegiate School (now Akshoy Sikshayatan), another school in Howrah town, traces its history from the year 1857. In 1862, at the instance of the local people, a Middle English school was started at Santragachi with a Government grant-in-aid of Rs. 50 a month. In 1865 one Mr. Spencer and one Baboo Sreenath Ghose jointly launched a school called the Aided Anglo-Vernacular Bible School at Ramkrishnapur which came to be run later by the Society for the propagation of the Gospel.[1] Another school, the Sibpur Dinabandhu Institution was founded in 1874.

The schools so far established in the district were all in the urban areas. From around 1830, attempts were made to establish new schools and in some cases to upgrade the *pāṭhsālās* in the rural areas specially of Amta and Bagnan thanas. The initiative came occasionally from the local landlords and tradesmen but more often from the various missionary societies. Many of the schools so founded did not survive for long. The oldest of these institutions was the *pāṭhsālā*-cum-primary school, founded in 1830 by the missionaries of the Society for the propagation of the Gospel at Gholadanga within Amta P.S.[2] At the initiative of Srinath Ghosal, a local Brahmin zemindar, a Middle Englishs chool was established at Mugkyan (P.S. Bagnan) in 1866 An Englishman was appointed its first Headmaster. After a few years it was upgraded to a High English scheol and sent up its first batch of candidates for the Entrance Examination of the University of Calcutta in 1887. In 1890 the school had only five teachers; in April 1969 the Mugkalyan Higher Secondary School has 25 teachers and over 600 students.

Early days of modern female education

"Female education took its root in the central part of the (Howrah) city when the first English school for girls was opened in 1820, followed by another in 1839 by a lady. The teaching of European and Eurasian girls, however, was known to have started much earlier in the military Orphan School before 1807."[3] The 'Bazar School' founded by the Serampore missionaries in Howrah town in 1820 was, therefore, the first school for Indian girls in the district. In 1839

[1] ibid. pp. 56-57.
[2] ibid. p. 58.
[3] Amiya Bhusan Chatterjee—loc. cit.

one Mrs. Hampton opened a Primary school for local girls in Howrah, it did not survive for long.[1] In 1857 the Roman Catholic Mission opened a school for Chirstian girls in the premises of the Roman Catholic Church which was run by the nuns of the Loretto House. It closed down in 1862 and a successor school came into existence at the same place around 1870-71.[2] Between 1860 and 1862 several attempts were made by private persons, mostly ladies, to set up schools for the education of European and Eurasian girls, but for various reasons the institutions they established did not last long. Early in 1862, Rev. W. Spencer, the Chaplain of Howrah appealed to the Government for help in founding a girls' school in Howrah town which came into being in August 1864 as the St. Thomas' School. The Chaplain and the District Magistrate of Howrah have been *ex-officio* members of the managing committee of the school since its inception.[3]

The first school under Indian management for Bengali girls of the district was established at Santragachi (within Howrah city) in 1863 with a small grant-in-aid of Rs. 15 per month from the Government. The pupils were not charged any tuition fees and were supplied with books and stationery free. The institution, however, had to be wound up for want of funds at the beginning of 1870.[4] Of the existing girls' schools in the district, Sibpur Hindu Balika Vidyalaya was established in 1867; Raspur Girls' School, the first of its kind in the rural areas, in 1876; Baly Girls' School in 1887 and Mugkalyan Girls' School (P.S. Bagnan) in 1898.

Early days of modern collegiate education

It was the Christian missionaries who took the lead in the spread of collegiate education in the district. In 1820 about 50 acres of land belonging to the Botanical Garden at Sibpur was made over by the Government to the Society for the propagation of Christian Knowledge for establishing the Bishop's College which started functioning in 1824 and was designed to train missionaries for the propagation of Christianity. It owed its origin to the endeavours of Bishop Middleton and the expenses of its erection were met by various missionary societies. Early in 1880 the college was shifted from Sibpur to its present site in Bekbagan in Calcutta and its campus came to be occupied by the Government Engineering College, later re-named the Bengal Engineering College. This latter institution was opened as early as in 1856 but did not come to its present site at Sibpur before 1889.

The first college for general education in arts and science—the Narasinha Dutt College in Howrah town—was established in 1923. The reason for such a late start of general collegiate education is to be found in the nearness of Howrah to Calcutta and the economic

[1] C. N. Banerjei— loc. cit.
[2] ibid. p. 57.
[3] loc. cit.
[4] ibid., loc. cit.

and caste-composition of the people of the city, on whom lay the primary responsibility for taking the lead in founding institutions of higher learning.

LITERACY

According to the Census of 1961, 36.9% of the total population of the district were literate (i.e. they could at least read and write a simple letter in their mother tongue), which compared favourably with the West Bengal average of 29.3% Of the male and female populations of the district, 48.4% and 22.7% were literate, as against the State averages of 40.08% and 16.98% respectively.

The extent of literacy in the urban and rural areas of the district, however, show a wide divergence. In 1961, 47.6% of the urban population (54.2% of males and 37.4% of females) and 29.6% of the rural population (43.8% of males and 16.2% of females) were literate. In West Bengal in 1961, 52.9% of the urban and 21.6% of the rural population were literate; for every 59.6 literates in a hundred males in the urban areas there were 32.9 literates per 100 males in rural areas, and for every 43·3 literates in 100 females in the urban areas there were only 9.7 literates per 100 females in the rural areas of the State.

Going back in time over a decade we find that in 1951, 29.5% of the people of the district were literate. This means that there was a growth of literacy by 7.4% during the decade 1951-61. The corresponding growth for the State as a whole was 7.8%. This accomplishment was more marked among the males than among the females of the district. In 1951, 40.45% of the males (48.4% in 1961) and 15.48% of the females (22.7% in 1961) of the district were literate. The rate of decennial growth of literacy between 1951 and 1961 was, therefore, 8.0% and 7.2% respectively for males and females of Howrah district.

The growth of literacy was faster in the urban than in the rural areas of the district during the 1951-61 decade. In 1951 and in 1961 the percentages of literates to the total urban population of the district were 41.6 and 47.6 respectively, representing a growth of 6.0% over the decade. During the same years 24.0% and 29.6% of the people living in the rural areas of the district were literate representing a growth of 5 6% over the decade. The following table gives percentages of literacy among males and females of the district in urban and rural areas in 1951 and in 1961.

PERCENTAGE OF MALE AND FEMALE LITERATES IN URBAN AND RURAL AREAS OF HOWRAH DISTRICT IN 1951 AND 1961

	1951			1961		
Percentage of total	District as a whole	Urban	Rural	District as a whole	Urban	Rural
Persons	29.5	41.6	24.0	36.9	47 6	29.6
Males	40.4	47.4	36.6	48.4	54.2	43.8
Females	15.5	31.5	9.8	22.7	37.4	16.2

COMPARABLE FIGURES FOR WEST BENGAL AS A WHOLE

	1951			1961		
Percentage of total	State as a whole	Urban	Rural	State as a whole	Urban	Rural
Persons	21.5	—	—	29.3	52.9	21.6
Males	—	—	—	40.0	59.6	32.9
Females	—	—	—	16.9	43.3	9.7

The following table gives an account of literates as present age of the total population of some significant age-groups in so far as the rural and urban areas of the district was concerned during the Censuses of 1951 and 1961.

LITERATES AS PERCENTAGES OF THE TOTAL NUMBERS OF PERSONS IN RESPECTIVE CATEGORIES

	1951			1961		
Age-group	District	Rural	Urban	District	Rural	Urban
5 yrs.-14 yrs. Persons	25.89	21.5	39.16	29.04	28.4	45.5
Males	32.51	28.7	43.9	34.75	35.5	49.3
Females	18.49	13.5	33.7	22.27	19.5	42.6
15 yrs.-24 yrs. Persons	41.2	31.5	50.9	60.8	47.4	74.1
Males	50.5	46.7	54.2	66.8	66.2	67.3
Females	31.4	15.6	47.2	41.9	27.5	56.3
25 yrs.-34 yrs. Persons	37.8	29.6	46.1	36.2	16.5	55.9
Males	47.8	45.9	49.8	44.6	27.7	61.5
Females	23.8	10.4	37.3	24.9	4.9	44.9
35 yrs.-44 yrs. Persons	36.1	26.3	46.0	42.2	34.9	49.4
Males	48.4	45.3	51.5	58.7	56.8	60.7
Females	19.7	7.2	32.2	24.8	11.5	38.2

Literacy among the members of the Scheduled Castes

The Scheduled Castes account for 14.7% of the district population. Workers comprise 28.7% of their members in rural areas and 39.4% in urban areas of the district. 27.4% of the working people in rural

areas belonging to this category are small owner-cultivators and share-croppers, while 26.4% are agricultural labourers. 39.4% of the members of the Scheduled Castes in urban areas are workers, and 57.5% are wage labourers in manufacturing industries. A large number of them also work as wage labourers in transport, storage, communication and construction sectors of the economy. This economic background largely explains why in 1961 only 16.2% of them in the district (24.5% of males and 7.8% of females) were literate. In the urban areas, 16.8% of them were literate, of whom 24.2% were males and 9.4% females. In the rural areas, the corresponding overall figure was 15.5% composed of 24.7% of males and 6.3% of females.

PERCENTAGE OF SCHEDULED CASTE LITERATE (MALES & FEMALES) IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT: 1961

	Percentage of		
Sectors	Persons	Males	Females
District Total	16.2	24.5	7.8
Rural	15.5	24.7	6.3
Urban	16.8	24.2	9.4

According to the Census of 1961, the largest number of literates among the numerically significant Scheduled Castes of the Urban areas of the district was to be found among the Namasudras, 25.6% of whom were literate (37.8% of males and 13.5% of females). Next in order came the Jalia Kaibarttas with 23.6% literates (24.6% of males and 21.8% of females); Dhobas with 18.7% literates (20.9% of males and 16.5% of females); Bagdis or Duleys or Duley Bagdis with 17.9% literates (23.9% of males and 10.8 % of females); Pods or Paundras or Paundra Kshatriyas with 16.9% literates (29.9% of males and 4.0% of females) and Mehtors with 11.9% literates (20.9% of males and 2.9% of females).

In the rural areas of the district, the largest percentage of literates from among the numerically significant Scheduled Castes come from the Sunri community. In 1961, 49.6% of them were literate (62.6% of males and 37.1% of females). Next in order came the Namasudras with 23.4% (38.4% of males and 8.3% of females); Pods or Paundras with 21.7% (33% of males and 10.3% of females); Jalia Kaibarttas with 19.1% (25% of males and 13.2% of females); Hanris with 17.4% (15.9% of males and 18.5% of females); Rajbansis with 13.5% (25.1% of males and 2.9% of females); Bagdis or Duleys with 11.2% (18% of males and 4.3% of females); Kaoras with 10% (17.4% of males and 2.5% of females); Karengas with 9.7% (17.9% of males and 1.1% of females); Chamars with 7.3%

(13.8% of males and 0.8% of females) and Tiyars with 6.8% (12.8% of males and 0.8% of females).

The table below indicates the distribution of literacy in the urban and rural areas of the district in 1961.

DISTRIBUTION OF LITERATE MALES AND FEMALES IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT: 1961

District/Subdivision/ Police Station/Town		Total population		Educated & Literate	
		Males	Females	Males	Females
Howrah District	Total	11,27,392	9,11,085	5,45,811	2,06,517
	Rural	6,25,570	5,87,815	2,74,038	85,705
	Urban	5,01,822	3,23,270	2,71,773	1,20,812
Sadar Subdivision	Total	6,81,095	4,93,556	3,45,016	1,47,214
	Rural	2,22,856	2,01,088	93,277	32,592
	Urban	4,58,239	2,92,468	2,51,739	1,14,622
Howrah & Bally city within Howrah Municipal Corporation area (includes Howrah, Bantra, Malipanchghara, Golabari and urban-municipal areas of Sibpur, Bally and Jagachha police stations)	Urban	3,88,323	2,38,893	2,22,454	1,02,275
Bally (portions of the police station outside municipal area)	Total	30,638	22,593	13,582	7,858
	Rural	12,628	10,866	6,153	2,906
	Urban	18,010	11,727	7,429	4,952
Jagachha (portions of the police station outside municipal area)	Total	24,969	18,574	12,458	5,595
	Rural	21,498	15,410	11,160	5,084
	Urban	3,471	3,164	1,298	511
Sankrail	Total	69,181	55,465	27,149	8,525
	Rural	41,613	35,859	15,957	5,288
	Urban	27,568	19,606	11,192	3,237
Panchla	Total	47,995	45,029	16,689	4,438
	Rural	43,306	40,616	14,608	3,704
	Urban	4,689	4,413	2,081	734
Jagatballavpur	Rural	53,289	52,128	23,641	7,783
Domjur	Total	66,484	60,716	28,991	10,728
	Rural	50,306	46,051	21,706	7,815
	Urban	16,178	14,665	7,285	2,913
Uluberia Subdivision	Total	4,46,297	4,17,529	2,00,795	59,303
	Rural	4,02,714	3,86,727	1,30,761	53,113
	Urban	43,583	30,802	20,034	6,190
Bauria	Total	24,205	17,374	11,649	2,929
	Rural	7,279	6,320	3,329	769
	Urban	16,926	11,054	8,320	2,160
Uluberia	Total	1,06,843	95,644	44,089	11,862
	Rural	84,354	79,814	34,515	8,907
	Urban	22,489	15,830	9,574	2,955
Syampur	Rural	87,094	84,233	42,331	11,113
Bagnan	Rural	79,914	76,203	36,674	12,257
Amta	Total	1,05,242	1,02,196	47,282	15,277
	Rural	1,01,074	98,278	45,142	14,202
	Urban	4,168	3,918	2,140	1,075
Uday Narayanpur	Rural	42,999	41,879	18,770	5,865

Levels of Education

The preceding discussions about literacy-rates are apt to be misleading inasmuch as in the 1951 and 1961 Censuses the attainments of a literate person were fixed at no higher level than his ability to read and write a simple letter in his mother tongue. For a better understanding of the spread of education among the populace, a closer classification of literates would thus seem to be necessary. The following table prepared from data provided by the Census 1961 gives the percentages of educated males and females of various categories in the rural and urban areas of the district in relation to the respective total male and female populations. The categories are exclusive, i.e. the percentage given for graduates does not include the percentage given for matriculates, although graduates are also necessarily matriculates.

PERCENTAGE OF MALES & FEMALES OF DIFFERENT EDUCATIONAL ATTAINMENTS IN RURAL & URBAN AREAS OF HOWRAH DISTRICT: CENSUS 1961

Categories of Educated Persons	Percentage of total population of			
	Rural		Urban	
	Males	Females	Males	Females
Literate without educational level	25.91	7.79	28.08	23.43
Up to Primary or Junior Basic level	7.87	1.91	16.59	12.10
Matriculation or School Final or Higher Secondary level (their equivalent and/or above in case of rural and up to Matriculation or its equivalent in case of urban areas)	2.46	0.20	5.26	1.07
Technical diploma below degree level (urban only)	—	—	0.07	0.01
Non-technical diploma below degree level (urban only)	—	—	2.07	0.43
University graduation and/or Post-graduate degree, other than technical degree (urban only)	—	—	1.82	0.28
Technical degree or diploma equivalent to university graduation and/or Post-graduate degree (urban only)	—	—	0.22	0.02

Levels of education among Scheduled Castes

The extent of education among males and females of the Scheduled Castes living in the rural and urban areas of the district in 1961, can be assessed from the following table prepared from the data provided by the Census of 1961.

PERCENTAGE OF MALES AND FEMALES BELONGING TO SCHEDULED CASTES IN DIFFERENT LEVELS OF EDUCATIONAL ATTAINMENTS IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT IN 1961

Educational level	Sexwise percentage of Scheduled Caste population			
	Rural		Urban	
	Male	Female	Male	Female
Literate without educational level	18.40	5.18	17.31	7.68
Up to Primary or Junior Basic level	5.78	1.08	5.97	1.46
Matriculation/School Final/Higher Secondary level (in case of 'Rural', Matriculation or its equivalent & above; in case of 'Urban', Matriculation or its equivalent)	0.44	0.01	0.63	0.08
Technical diploma not equal to degree (urban)	—	—	0.007	nil
Non-technical diploma not equal to degree (urban)	—	—	0.12	0 007
University graduation and/or Post-graduate degree, other than technical degree (urban)	—	—	0.05	0.003
Technical degree or diploma equal to university graduation degree or above (urban)	—	—	0.005	nil

GENERAL EDUCATION

Most of the early schools in the district catered to the needs of primary or elementary education. While some of them were later raised to secondary standards, other remained at the primary level only to be wound up in course of time.

Primary and Junior Basic education

The Bengal Military Orphan Asylum, established in Howrah town in 1782, was a Primary-cum-vocational school for orphanc hildren of the men of the Bengal Army. The 'Bazaar' schools founded by the Baptist Missionary Society, as also the Bengali-medium 'monitorial' schools for native boys and girls were Elementary schools. The boarding school established in Howrah in 1821 by Statham, the first Baptist missionary stationed there, was a Primary school to start with, which was soon raised to the Lower Secondary standard. The seven schools started by the missionaries between 1824 and 1827 at Sibpur, Bantra and other localities of Howrah were vernacular institutions which also imparted primary education. The first Vernacular school under Indian management was opened at Santragachi in 1857 with the aid of a government grant.

The early girls' schools of the district were likewise all Primary schools. The Bengal Military Orphan Asylum trained girl students and the 'Bazaar' school for native girls set up by the Serampore

Missionaries in Howrah city in 1820 was also a Primary school. Mrs. Hampton's School opened in 1889 and St. Thomas' School established in 1864, both in Howrah town, were intended for primary education of girls although the latter was subsequently raised to the status of a High school.

At the turn of the century primary education used to be imparted through Upper and Lower Primary schools. In 1907-08 there were 68 Upper and 634 Lower Primary schools for boys and 70 Primary schools for girls covering both the categories. The total roll strength was 30,230 boys and 3,083 girls and the expenditure incurred in that year was Rs. 78,726 of which Rs. 16,637 (or 21%) was borne by the Government and the local bodies while 71.6% of the expenses were realized from fees. In 1892-93, there were 26,284 pupils in the Primary schools of the district. In course of 15 years, from 1892-93 to 1907-08, the increase in enrolment of students was 26.8 per cent, although the number of schools remained practically the same, being 772 in 1907-08 as against 773 in 1892-93.[1] In 1941-42, there were 1,003 Primary schools in the district with 59,326 pupils in them. In 1950-51, their number came down to 815, but the enrolment figure was as high as 1,01,158.[2] The reason for the decline in number is to be found in the fact that many of the Primary schools got incorporated into or were raised to the status of Secondary schools.

From 1949 onwards a new type of institution for catering to the needs of primary education began to be established in the district. These 5-class Junior Basic schools form an integral part of Mahatma Gandhi's Basic Education Scheme as modified and adopted by the Government of West Bengal. "Learning through work and useful activity" is the objective of this project which consists of four distinct stages of education to be imparted by four successive types of institutions, namely Pre-Basic Nursery schools, Junior Basic schools (Primary), Senior Basic schools (Middle) and Higher Secondary Multipurpose schools. Of the existing Junior Basic schools in the district, most are newly established while some are old Primary schools lately equipped to cater to the necessities of Basic education.

The following table gives a statistical picture of Primary education in Howrah district between 1960-61 and 1964-65.

PRIMARY EDUCATION IN HOWRAH DISTRICT: 1960-61 & 1964-65[3]

	1960-61		1964-65	
	Primary schools	Junior Basic schools	Primary schools	Junior Basic schools
Number of institutions	1,390	50	1,484	70

(contd.)

[1] L. S. S. O'Malley & Monmohan Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 145.

[2] A. Mitra (Ed.)—Census 1951. West Bengal District Handbooks: Howrah. Calcutta, 1953. p. 144.

[3] Source: Directorate of Education, West Bengal.

PRIMARY EDUCATION IN HOWRAH DISTRICT: 1960-61 & 1964-65—*contd.*

	1960-61		1964-65	
	Primary schools	Junior Basic schools	Primary schools	Junior Basic schools
Total enrolment of students	1,89,844	7,522	2,37,248	11,828
Number of boys	1,18,066	4,846	1,45,500	7,050
Number of girls	71,778	2,676	91,748	4,778
Total direct Govt. expenditure (in Rs.)	34,24,842	1,72,303	not available	not available

Secondary education: Middle or Junior High schools

Since the very inception of Secondary education in Bengal, it has been divided into the Middle or the Junior secondary and the Higher secondary stages. Till about 1857, when the University of Calcutta started holding the Entrance or the school leaving examinations, there was no uniform standard of teaching in the secondary schools. Thereafter, a standardized curricular system was introduced in these institutions. The Middle English schools began to teach up to the Middle or Junior secondary stage and the High English schools up to the school leaving stage. Many of the Middle and High English schools looked after Primary education and the High English schools also functioned as Middle schools. After independence, with the reorganization of Secondary education under the Board of Secondary Education, West Bengal, the institutional structure changed considerably. The old Middle English schools have been replaced by the newly set up 4-class Junior High schools while Senior Basic schools have come into existence for providing practical-cum-theoretical education to children between 11 and 14 years of age coming up from the Junior Basic stage. The latter schools comprise of 3 classes, namely classes VI to VIII. Some of them have primary sections attached to them.

In 1907-08 there were 27 Middle English and 6 Middle Vernacular schools in the district. Of the schools meant for girls, only one was Secondary and the rest either Lower or Upper Primary schools. The former, namely the Banibau Girls' School (P.S. Uluberia), was a Middle English school. The M.E. schools for boys together had 1,945 boys on their rolls as against 1,728 boys in 1892-93 when there were 23 such schools. In 1907-08, the 6 Middle Vernacular schools had 629 pupils, as against 1,002 pupils and 11 schools in 1892-93. From these comparable figures it would appear that the Middle Vernacular schools were then already on their way out.[1] In 1941-42, there were 73 Middle English schools in the district attended by 4,012 pupils and in 1950-51, their number rose to 84 with 9,700 pupils in them.[2]

The following table[3] gives a statistical picture of Middle or Junior High education in the district in 1960-61 and in 1964-65.

[1] O' Malley & Chakravarti—op. cit. pp. 144-45.
[2] A. Mitra (Ed.)—Census 1951. West Bengal District Handbooks: Howrah. Calcutta, 1953. p. 144.
[3] Source: Directorate of Education, West Bengal.

JUNIOR STAGE OF SECONDARY EDUCATION IN HOWRAH DISTRICT IN 1960-61 & 1964-65

	1960-61		1964-65	
	Junior High schools	Senior Basic schools	Junior High schools	Senior Basic schools
No. of schools	123	5	137	6
No. of boys' schools	81	2	91	4
No. of girls' schools	42	3	46	2
Total roll strength	12,058	479	16,815	439
Roll strength of boys	6,815	172	9,195	2[illegible]8
Roll strength of girls	5,242	307	7,620	201
Total direct Govt. expenditure (in Rs)	2,87,822	12,023	not available	not available

Secondary education: High & Higher Secondary stages

As has already been stated, most of the early schools in the district started as Primary schools. The real High schools came into existence only after the Calcutta University began holding the Entrance examination after 1857. The Howrah Zillah School, founded in 184[illegible] and the Sulkia Aided Anglo-Vernacular School (later renamed as Salkia A. S. School), established in 1855, were perhaps the oldest High schools in the district which sent their first batch of students for the Entrance examination in 1859. The Mugkalyan High English School, one of the earliest High schools in the rural areas of the district, sent its first batch of students for the Entrance examination in 1887

In 1907-08, the following 26 High schools were in existence in the district: Howrah Zillah School, Amta High School, Andul High School, Bagnan H.E. School, Bally Rivers Thompson School (now Santiram Mahavidalaya), Baluti H.E. School. Howrah Bible School. Jagatballavpur H.E. School, Jaypur Fakirdas Institution, Jhapardah Duke Institution, Jhikira H.E. School, Maju R. N. Bose School, Mugkalyan High School, Narit Nyayaratna Institution, Panitras High School, Panpur H.E. School. Raspur H.E. School, Sasati Nahala Abinaschandra H.E. School, Salkia A. S. School, Bantra High School, Bantra J. R. Belilios Institution, Howrah Ripon Collegiate School (now Akshoy Sikshayatan), Garh-Bhabanipur H.E. School, Salkia Hindu School, Sibpur H.E. School and Uluberia H.E. School. Eight of them were in the urban-municipal areas and the rest in non-municipal and rural areas.

There was no girls' High School in the district till 1940 when the Baly Girls' School, established in 1887, was raised to that status. Mugkalyan Girls' School (P.S. Bagnan), founded in 1898, was upgraded to a High school in 1942. The earliest of the existing girls' schools in the district, viz. Sibpur Hindu Balika Vidyalaya, opened in 1867, became a High school only in 1952. Raspur Girls' School,

the second oldest in the group, attained the same status in 1960. Baniban Girls' School, the first of the existing girls' schools in the district to attain the status of a Middle English school, was upgraded to a High school in 1953. After the reorganization of Secondary education, the Baly Girls' School, the Sibpur Bhawani Balika Vidyalaya and the Baniban Girls' School were the first to be converted into Higher Secondary schools.

The following table[1] gives a statistical picture of the final stage of Secondary education in the district in 1960-61 and in 1964-65.

FINAL STAGE OF SECONDARY EDUCATION IN HOWRAH DISTRICT IN 1960-61 & 1964-65

	1960-61		1964-65	
	10-class High schools	11-class Higher Secondary & Multi-purpose schools	10-class High schools	11-class Higher Secondary & Multi-purpose schools
Total No. of schools	82	56	77	107
No. of schools for boys	58	47	45	86
No. of schools for girls	24	9	32	21
Total roll strength of students	25,528	28,944	26,112	56,233
Roll strength of boys	16,173	23,560	12,896	42,155
Roll strength of girls	9,355	5,384	13,216	14,078
Total direct Govt. expenditure (in Rs.)	5,87,418	10,04,224	not available	not available

Spread of school education

In 1950-51, 58% of boys of the district of school-going age (5 to 14 years) and 20% of girls of the same age-group were attending various educational institutions. In 1960-61, the corresponding figures had increased to 58.8% for boys and 36.9% for girls. Extending the age limit to 19, we find that 49.6% of boys and 29.1% of girls of the 5-19 years' age-group were in school in 1960-61.

A start was made for introducing free and compulsory primary education in the district in 1951 when the District School Board and the District Board (now the Zillah Parishad) took up its management in the rural areas. After ten years, in 1961, 1,22,912 boys (out of a total of 1,49,507) and 74,344 girls (out of a total of 1,44,001) in the district between 5 and 9 years of age were attending Primary and Junior Basic schools.

Distribution of schools

In 1960-61, there were altogether 1.440 Primary and Junior Basic schools in the district or one such school per 0.38 square mile. 189

[1] Source: Directorate of Education, West Bengal.

of these schools were within urban-municipal areas (or one school per 0.08 square mile) and the rest in non-municipal rural areas (or one school per 0.44 square mile).

In the same year there were 266 Secondary schools (including Junior High, Senior Basic, 10-class High and 11-class Higher Secondary and Multipurpose schools) in the district, which worked out at one school per 2.10 square miles in the district; in the urban-municipal areas there was one such school per 0.28 square miles and in the non-municipal rural areas, one such institution in every 2.60 square miles. In 1907-08, there was one Secondary school per 8 square miles, the corresponding figure in 1950-51 being one per 6.7 square miles. In 1960-61, the figure improved still further to one school per 4.05 square miles which in 1964-65 became one school per 3.44 square miles (the actual number of High and Higher Secondary schools in the district in the latter year being 184).

COLLEGIATE EDUCATION

Bishop's College

Christian missionaries took the lead in founding the earliest college for general education in the district. In 1820 about 50 acres[1] of land belonging to the Botanic Garden at Sibpur was made over by Government to the Society for the Propagation of Christian Knowledge which established the Bishop's College in 1824 for training missionaries for the propagation of Christianity. The college owed its inception to the endeavours of Bishop Middleton and the expenses for its erection were borne by various Christian missionary societies. Early in 1880 the college was shifted from Sibpur to its present site at Bekbagan in Calcutta. The college premises at Sibpur thereafter came to be occupied by the Government Engineering College, the predecessor of the Bengal Engineering College. It was not until 1923 that the next college was opened in the district. The reason for such a late start of collegiate education in Howrah is to be found mainly in its nearness to Calcutta.

Narasinha Dutt College, Howrah city

Narasinha Dutt College at 129 Belilious Road in the central part of Howrah city was established in 1923 and received its affiliation from the University of Calcutta for conducting classes in Intermediate Arts in the same year. The classes, however, started in 1924 when the college was permitted by the University to hold classes in the Intermediate Science course as well. Founded by late Suranjan Dutt in memory of his father Narasinha Dutt, the institution owes a great deal to the Dutt family and the Howrah Municipality for its development. It was upgraded to a Degree college in 1941 when the Bachelor of Arts course was introduced. It received affiliation for the B.Sc. course in 1946. Honours classes in Arts and Science subjects were started in 1949 and an Evening Section was inaugurated in 1950 for conducting the Intermediate Commerce course. The latter branch

[1] George King—The Indian Botanic Garden at Sibpur. Calcutta, 1895. p. 10.

has been teaching the B. Com. course since 1957. The college switched over to the 3-year Degree course in 1960.

The institution has three different sections. The Day Section is co-educational.

The Morning Section, opened in 1963, is meant for girl students alone. The Evening Section for Commerce courses teaches only male students.

The college runs Honours classes in Chemistry and Mathematics in Science, English, History, Sanskrit, Philosophy, Economics, and Political Science in Arts, and Accountancy in the Commerce course.

The College has at present 3 buildings of its own; one of them is used as the Chemistry Laboratory, a portion of another is used as the Physics and Biological Sciences Laboratories while the rest of the buildings are used as class-rooms, office, staff room, common room, library, etc. The college has no hostel of its own. It has a recognized Students' Union which runs a students' literary society, a dramatic club and a debating forum.

National Cadet Corps training is compulsory for male students of the Day Section only, female students and students of the Evening Section being exempted from it. The college library possesses 10,141 books at present and procures, on an average, about 500 volumes per year. It also subscribes to 20 journals and periodicals.

Ramakrishna Mission Saradapith Vidyamandira, Belur

In 1939, the Belur Math and Mission (Ramakrishna Mission) decided to set up a residential college within the Math campus in Belur (P.S. Baly). Miss Macleod, an American disciple of Swami Vivekananda, donated a sum of Rs. 10,000 for the purpose and in January 1940 the foundation stone of the Ramakrishna Mission Vidyamandira and in May of the same year the foundation stone of its first hostel were laid. In 1941 the Ramakrishna Mission Saradapitha was created to supervise all the educational activities of the Mission and the Vidyamandira was placed under its management. The Vidyamandira was opened on July 4, 1941 with an affiliation from the University of Calcutta to teach in Intermediate Arts. In 1946 it was permitted to conduct I.Sc. classes as well.

With the closure of the Intermediate College in 1960, the first phase of the career of the Vidyamandira ended, and with the opening, in the following year, of the 3-year Degree college with only Honours courses, the college stepped into its second phase. It was through liberal grants received from the Central and State Governments and voluntary contributions from private individuals and institutions that the Vidyamandira was able to meet the additional expenditure of about Rs. 12,00,000 for its upgrading. Two big laboratory buildings and two additional hostels, each accommodating 100 students, were constructed and books and equipments worth a few lakhs of rupees were purchased.

There is a hospital, under the supervision of a qualified physician,

to attend to the medical requirements of the students. A separate two-storied building constructed in 1959 houses a gymnasium, the National Cadat Corps office and an auditorium. N.C.C. training is compulsory for all students to whom facilities for out-door sports and games are also available. A hobby workshop, to encourage inventive talents of the students, was set up in 1962. The students' union named the Chhatra Parishad organizes such co-curricular activities as holding debates and symposia and organizing socio-religious functions, festivals, educational tours and social-work camps.

Ramsaday College, Amta

Ramsaday College at Amta was founded in 1946 at the instance of Panchanan Chongdar of the neighbouring village of Barda in memory of his father Ramsaday Chongdar. He gifted to the institution a two-storied building with extensive lands and a lakh of rupees for its maintenance and expansion. It is the first college to be started in the rural areas of the district. Until 1949, when it was permitted by the University of Calcutta to open I.Sc. classes, it had an affiliation only for running I.A. classes. In 1951, it received from the State Government a substantial *ad hoc* grant under the scheme for dispersal of displaced college students to build a new building to house science laboratories and classes. In the same year the college also received permission to conduct B.A. Pass classes and in 1956 similar authority was given to it to run B.Sc. Pass classes.

After the reorganization of collegiate education, the college now conducts Pre-University Arts and Science classes and 3-year Degree classes in Arts (Pass and Honours only in History) and Science (Pass course only).

The college has four buildings and its grounds cover 3.24 acres There is a students' common room, an indoor sports and games hall, a gymnasium, and office rooms for the N.C.C. and the students' union. 95% of the boys join the N.C.C. but the girls do not enjoy this facility. On 31.3.67 the college library had 4,788 books and subscribed to 10 periodicals. It acquires about 150 volumes each year. There is, besides, a students' text book library containing 466 volumes. The college has a hostel for the male students only with 36 seats.

Howrah Girls' College

Howrah Girls' College, the first and until now the only institution of its kind in the district, was opened in August 1946 as a morning college at 148, Sibpur Road in the southern part of Howrah city. Its founder-principal is Bejoy Krishna Bhattacharyya, a prominent educationist and political worker of Howrah. In August 1947 it secured the affiliation of the University of Calcutta and shifted to the spacious buildings of Bhabani Balika Vidyalaya to hold morning classes there. The managing committee of the school formed its first governing body and in 1949-50 it finally shifted to the premises of the defunct St. Thomas' School at 5/3 Mahatma Gandhi Road near the offices of the Howrah Corporation.

Initially started as an Intermediate Arts college, it received affilia-

tion for B.A. Pass courses in 1949-50. Honours courses in Sanskrit and Philosophy were inaugurated in 1956-57, in History in 1957-58, in Economics in 1958-59 and in Bengali in 1959-60. When the Pre-University and 3-year Degree courses in Arts were introduced in 1960-61, the college was allowed to hold the corresponding classes in all subjects in which affiliation had been previously granted up to the I.A. and B.A. standards. Affiliation in Political Science (Pass and Honours) was obtained in 1960-61 and in Education and English (Honours) in 1965-66. In 1966-67 it was permitted to conduct Pre-University Science, Pre-University Commerce, 3-year B.Com. with Honours classes in Advanced Accountancy and Auditing. The college has plans to start B.Sc. Pass and Honours classes in the near future. Classes are held in two shifts; P.U. Arts and B.A. classes in the morning and P.U. (Arts & Science), B.A. (Pass and Honours), B.Com. (Pass and Honours) and B.T. classes during the day.

The college stands on 1.17 acres of land of which about an acre is open space and is used for games and sports like volley-ball and badminton and training in free-hand exercise, drill and *bratachāri*. Some 200 students out of a total of about 2,200 take the N.C.C. training each year. There is an auditorium with accommodation for 500 persons. The college has no hostel attached to it. In March 1967, the college library had a total collection of 11,990 volumes. It acquires about 875 volumes per year and subscribes to 36 Indian and 23 foreign journals. There is a recognised students' union which holds debates, symposia, literary discussions, variety programmes and dramatic performances.

Sibpur Dinobundhoo Institution

Sibpur Dinobundhoo Institution, a male students' college at 412/1 Grand Trunk Road (South), Sibpur was established in 1948 at the initiative of Bejoy Krishna Bhattacharya and Pulin Behari Halder with affiliation of the University of Calcutta to teach in Intermediate Arts and Science subjects. It was permitted to open B.A. (Pass) and B.Com (Pass) classes in 1949-50, B.Sc. (Pass) classes in 1958, Honours classes in English, Bengali and History in 1963-64, B.Com. (Honours) classes in 1965-66 and B.Sc. classes in Mathematics (Honours), Physics and Chemistry in 1966-67.

Pre-University Arts and Science, B.A. and B.Sc. (Pass and Honours) classes are held in the Day Section while the Commerce classes are held in the evening.

The college has three buildings of its own, but no open space or gymnasium or auditorium. N.C.C. training is compulsory for the boys in the Day Section and optional for those in the Evening Section. About 60 per cent of the students on an average join the N.C.C. The college library has about 10,000 books, acquires about 200 volumes per year and subscribes to 35 periodicals. The students' union organizes occasional debates, variety programmes and dramatic performances. There is no hostel attached to the college.

Uluberia College

Uluberia College came into existence in 1948-49 as an Intermediate Arts college at the instance of Haripada Ghosal, Gurudas Goswami and Aswini Kumar Das of whom the former, a noted educationist of the area, became its founder principal. It received affiliation to open I.Sc. classes in 1950-51 and B.A. (Pass) classes in 1957-58. After the re-organization of collegiate education, it switched over to Pre-University Arts and Science and 3-year B.A. (Pass) courses in 1960-61. It inaugurated the B.Sc. (Pass) course in 1962-63, got permission to teach History (Honours) in 1964-65 and Bengali (Honours) in 1965-66. In 1966-67 an Evening Section was opened for teaching Pre-University Arts and Commerce and 3-year B.Com courses besides Honours classes in Mathematics. The Day Section of the college is co-educational while the Evening Section is for male students only.

The college has four buildings of its own and another has been leased out to it by the Howrah Zilla Parishad. One of them is used as a hostel for male students with 25 seats. There is no gymnasium or auditorium but N.C.C. training is available which is compulsory for the male students of the Day Section of whom about 56 per cent participate in it. The college library has a collection of 4,488 books and the rate of acquisition is around 300 volumes per year. There is a recognized students' union in the college.

Bagnan College

Bagnan College was established in July 1958 chiefly through the munificence of Badal Chandra Maji of the neighbouring village of Khalor in Bagnan P.S. He donated a building and a plot of land attached to it and his example was followed by others. At its inception the college could teach up to the B.A. (Pass) standard. In 1964 it obtained permission to open Honours classes in Bengali and in 1966-67 an Evening Section was opened for teaching Commerce courses. The college now has three buildings and an open space of about an acre which is used for outdoor games like badminton, volley-ball, etc. The college does not have any hostel of its own. It has a recognized students' union which organizes games, seminars, debates and variety programmes. The college library has a total collection of 3,064 books; the yearly acquisition is around 250 volumes and it subscribes to 24 journals.

Syampur Siddheswari Mahavidyalaya, Anantapur

Syampur Siddheswari Mahavidyalaya at the village of Anantapur (P.S. Syampur) was established in 1964 at the initiative of Messrs. Manna, Mondal & Mullick Co., a firm of local businessmen, which donated Rs. 1,50,000 for setting up the institution. It started with an affiliation to teach up to the 3-year B.A. (Pass) standard and in the following year it was permitted to introduce B.Sc. (Pass) classes. In 1966 Honours classes in Political Science were opened.

The college is housed in its own building standing on extensive grounds which are used for out-door games. It has no gymnasium but N.C.C. training facilities are available for male students only

since the 1967-68 session. There is an auditorium with seating capacity for 500 people and a hostel for 60 residential students. The college library has 1,015 volumes and subscribes to 6 journals. The students' union runs a literary society, a debating forum and a dramatic club.

Prabhu Jagatbandhu College, Jhorhat

Prabhu Jagatbandhu College at the village of Jhorhat (P.S. Sankrail) was established in 1964 at the initiative of T. K. Ghose, a local physician, H. Bhattacharya, a local educationist and Bejoy Krishna Bhattacharya, a prominent educationist and political worker of the district with affiliation from the University of Calcutta to teach Pre-University Arts and Commerce and 3-year B.A. (Pass) courses. In 1965 Pre-University Science and in 1966 B.Com. (Pass) classes were opened.

The college is housed in its own building constructed in 1964. It has neither an auditorium nor a gymnasium but N.C.C. training facilities are available and 95 per cent of the male students join the course. The college has no hostel or students' union. Its library has a collection of 1,500 books.

Lal Baba College, Baly

Lal Baba College at 199 Grand Trunk Road, Baly was founded in 1964 at the initiative of the disciples of Lal Baba, a Hindu mendicant who had his *āsrama* in the area. The disciples created a trust endowment and appointed a Board of Trustees for setting up the college and managing its affairs. It started with Pre-University Arts and Commerce and B.A. (Pass) classes and received permission later for opening B.Com (Pass) classes In 1965 it was permitted to teach the Pre-University Science course but classes are yet (May, 1967) to be started. The college works in two shifts. The college is still housed in a school run by the same Board of Trustees while its own four-storied building is under construction. There is a separate playground near by for outdoor sports and games and N.C.C. training. The college does not have any gymnasium, auditorium or students' hostel. Its library has 1,400 books. The students' union organizes occasional debating and literary meets and dramatic performances.

The following table gives a statistical picture of collegiate education in Howrah district in 1960-61 and 1964-65.

COLLEGIATE EDUCATION IN HOWRAH DISTRICT: 1960-61 & 1964-65

	1960-61	1964-65
(1) Total No. of Colleges for General Education	7	10
(*a*) colleges meant exclusively for boys	1	1
(*b*) colleges meant exclusively for girls	1	1
(*c*) co-educational colleges	5	8
(2) Total enrolment of students in Arts courses	3,352	5,570
(*a*) No. of boys in Arts courses	1,856	2,774
(*b*) No. of girls in Arts courses	1,496	2,796

(*contd.*)

COLLEGIATE EDUCATION IN HOWRAH DISTRICT: 1960-61 & 1964-65—*contd.*

	1960-61	1964-65
(3) Total enrolment of students in Science courses	1,727	2,582
(a) No. of boys in Science courses	1,671	2,399
(b) No. of girls in Science courses	56	183
(4) Total enrolment of students in Commerce courses	446	1,127
(a) No. of boys in Commerce courses	446	1,124
(b) No. of girls in Commerce courses	—	3
(5) Total direct Governmental expenditure	Rs. 3,80,066	Rs. 4,54,612

PROFESSIONAL & TECHNICAL EDUCATION

Teachers' Training

Sikshanamandira, Belur

Sikshanamandira, a college for training graduate teachers, run by the Ramakrishna Math and Mission and located within its campus at Belur, was inaugurated in 1958 at the initiative of the Ramakrishna Mission Saradapitha with substantial recurring and non-recurring grants from the Government of West Bengal. It is the first (and also the foremost) B.T. college in the district. It opened an Extension Service Unit in January 1963, to acquaint the trainees with the problems and methods of rural upliftment through education, so that they could play effective leadership roles in rural society. A wholly residential institution, the college has a three-storied hostel constructed in 1966.

It had 109 trainees in 1960-61 and 125 in 1965-66. In the latter year, the State Department of Education granted a sum of Rs. 1,23,000 towards its maintenance. The institution is intended to form a part of the proposed Vivekananda University.

Howrah Girls' College, Howrah

The Howrah Girls' College at 5/3 Mahatma Gandhi Road, Howrah received affiliation from the University of Calcutta in 1965 to open B.T. classes exclusively for female students. The classes are conducted in the same building; there is no hostel for the scholars.

Bengal Engineering College, Sibpur

The parent body of the present Bengal Engineering College, Sibpur was established in 1856 by the State Public Works Department and was located at Writers' Buildings, Calcutta. It was then known as the Civil Engineering College, Calcutta. In 1864 when the Education Department took over the charge of running the institution, it was shifted from Writers' Buildings to the Presidency College, Calcutta of which it became a department. Finally, on April 5, 1880 it was removed to its present site under its new name the Government Engineering College, Howrah. The site measuring about 110 *bighās* (37 acres) had belonged to the Bishop's College, Sibpur which in the earlier part of the same year was shifted to Calcutta. The Civil Engineering College, Calcutta had been affiliated to the University of Calcutta in 1857. It then imparted a 3-year theoretical and a 2-year practical course for the diploma of Licentiate in Civil Engineering. In 1860 the college introduced the degree of Master in Civil Engineering. In 1865, the Presidency College, Calcutta got affiliation from the Calcutta University in respect of its Civil Engineering

Department and started imparting training for Licentiate in Civil Engineering, Degree in Civil Engineering and Honours in Civil Engineering. After the college had shifted to its present site in 1880 it was permitted by the University to run courses for Licentiate in Civil Engineering, Degree in Civil Engineering, Licentiate in Mechanical Engineering and Degree in Mechanical Engineering.

In 1922 all the departments of the college were re-organized to meet the demands of higher education in engineering and technology. The Licentiate courses were abolished and the institution became a full-fledged degree college with a Civil Engineering, a Mechanical & Electrical Engineering and a Mining Engineering Department. In 1926 after the Indian School of Mines was opened at Dhanbad, admission of new students into the mining classes was stopped and this wing was finally closed down in 1929. In 1939-40 a Degree course in Metallurgy was introduced leading to the creation of a new department of Chemistry and Metallurgy, the one connected with Chemistry having existed since 1898.

Since its inauguration with the inception of the college in 1856, the department of Mathematics has been teaching basic mathematics, theoretical mechanics and mathematical physics, a sound knowledge of which is required in all branches of engineering. From 1956 post-graduate classes in Electrical Engineering are being taken with advanced mathematics and conducted in this department. Geophysical data recorded and analyzed at the Geophysical Laboratory attached to this department are regularly supplied to the California Institute of Technology and the U.S. Coast and Geodetic Survey on an exchange basis. The department has also been selected as one of the few Indian observatories for the supply of cosmic ray data to international laboratories and institutes working in this field.

In 1949-50 two new courses were introduced, the first a degree in Architecture and the second a post-graduate diploma in Town and Regional planning. The newly created Department of Architecture & Town Planning now follows a 5-year course for the degree of Bachelor of Architecture and the post-graduate course in town and regional planning runs for two academic sessions for civil engineering graduates and for one academic session for degree or diploma holders in architecture leading to the Diploma of Town and Regional Planning.

In 1953-54 the Calcutta University granted affiliation to the college for conducting Masters' courses in Civil, Mechanical, Electrical and Metallurgical Engineering, each extending over two consecutive academic sessions. The Department of Applied Mechanics was started in 1947 and functions now more or less as a research institution conducting investigations in the field of elasticity, material testing and hydraulic flow. The Department of Physics was started in 1890. With the rapid growth of importance of electronics and

tele-communication engineering, a new degree course in the subject was inaugurated in 1957-58 and the department is now known as the Department of Physics and Tele-communication Engineering. In 1956-57 the Government of India sanctioned the introduction of a 4-year Degree course in Mining Engineering to meet the urgent demand for mining engineers. The new course covers four academic sessions.

In 1945 a new department of Humanities was opened to teach in civics, basic sociology, industrial relations, basic economics and basic accountancy, in keeping with the modern trend in engineering education in the advanced countries of the West. The Department of Training and Placement came into existence in 1948 to liaise between the college authorities and private industries for creating employment opportunities for the students.

The admission capacities of the college from 1947 to 1965 in the degree courses in Civil Engineering, Mechanical Engineering, Electrical Engineering, Metallurgical Engineering, Tele-communication Engineering, Architecture and Mining Engineering are shown in the following table.

	Degree Courses							
Year	C.E.	M.E.	E.E.	Met. E.	T.E.	Arch. E.	Min. E.	Total
1947	89	23	26	6	—	-	—	144
1950	82	32	32	9	—	20	—	175
1955	80	30	30	20	—	20	—	180
1960	192	72	72	36	48	24	36	480
1965	160	60	60	30	40	20	30	400
1966	160	60	60	30	40	20	30	400

There are several workshops in the college for the practical training of students in various branches of study. Prior to 1894 these workshops were under the control of the Public Works Department and used to be run more or less on a commercial basis. In 1894 the Government sanctioned partial transfer of the workshops to the Education Department and in 1897 all of them were finally transferred to that department. The six existing workshops relate to carpentry, smithy and welding, foundry and pattern, boiler and engine, machine and fittings and electricity and are under the overall supervision of a Superintendent and a Chief Foreman, one Foreman being in charge of each of the workshops. Besides the workshops there are one or more laboratories attached to each department.

Advanced research facilities in the following subjects are available to qualified graduates in engineering and metallurgy: (*i*) underground

corrosion of metals and alloys under Indian condition, (*ii*) sacrificial annodes for cathodic protection of underground structures, (*iii*) theoretical research on mathematical theory of clasticity and theoretical seismology, (*iv*) metal testing and (*v*) hydraulic flow.

Started in 1856 with only 621 volumes, the college library, housed on the third floor of the main building, now consists of 35,905 books excluding periodicals. It collects over 4,500 learned journals of varied interests every year.

Sprawling over 120 acres of land with several buildings on it, the college campus has enough open space for outdoor recreations. There is a gymnasium and several fully equipped common-rooms providing for indoor games. The well furnished auditorium is used for holding meetings and occasional cultural functions.

A fully residential institution since 1889, the college has plenty of hostels, the details of which are given in the following table.

Year	No. of hostels	Total No. of seats
1947	4 (besides some temporary barrack hostels)	494
1950	-do-	612
1955	9	678
1960	16	2,138
1965	20	2,286

A residential college of such proportions cannot but have built-in arrangements for medical care of its inmates. In 1891-92 Government sanctioned the establishment of a hospital which was opened to patients in 1893 under the supervision of a Resident Medical Officer. It now caters to the medical needs of the students, teachers and other employees of the institution.

The following table gives a subjectwise break-up of the number of engineering graduates and post-graduate degree holders turned out by the college since 1947.

	Bachelors' Degree					
	C.E.	M.E.	E.E.	Met. E.	Arch. E	Min. E.
1947	53	13	13	6	—	—
1950	54	13	17	5	—	—
1955	61	20	21	9	7	—
1960	73	27	27	21	9	14
1965	122	64	73	27	13	22
1966	148	79	73	34	14	25

(*contd.*)

Masters' Degree & D.T.R.P.

	C.E.	M.E.	E.E.	Met. E.	D.T.R.P.
1955	—	—	—	—	—
1960	—	—	—	—	4
1965	8	2	5	1	10
1966	8	7	5	6	7

Howrah Homes: Industrial Training Institute, Santragachi

The Carriage and Wagon Workshop of the now defunct East Indian Railway ran a technical school at Liluah which was the first of its kind in the district. Of the existing institutions of this type, the Industrial Training Institute under the Howrah Homes[1] at Santragachi is one of the oldest. It was started in November 1946 with training courses in handloom weaving, dyeing and printing of textiles, cutting and tailoring, and carpentry. In 1949 hand-operated letter-press composition and printing and in 1951 training in leather craft were added to the curriculum. In May 1950, the Directorate of Resettlement and Employment, Government of India took over the financial burden of running the institution in collaboration with the State Directorate of Industries on certain mutually agreed conditions. Eventually, its control was assumed by the State Government but the women's section remained with the Howrah Homes and receives grants-in-aid from the Government of West Bengal and the Social Welfare Board of the Government of India.

The Institute runs separate sections for men and women. The former imparts training in 64 engineering and non-engineering trades leading to licentiate diplomas and certificates given by the State Council for Technical Education. Over a thousand pupils on an average take training in the institution each year. The women's section teaches about 100 women a year in 20 trades and crafts leading to Lady Brabourne diplomas and certificates. Residential facilities are available for the male and most of the female students.

Silpamandira, Belur

Founded by Ramakrishna Mission Saradapitha within the campus of the Ramakrishna Math and Mission at Belur, Silpamandira is a Government sponsored polytechnic school recognized by the All India Council of Technical Education. It offers 3-year Licentiate courses in Civil, Electrical, and Mechanical Engineering approved by the State Council of Technical Education. In 1961-62 the roll strength of the school was 527 which rose to 616 in 1965-66. It is a wholly residential institution. Participation in N.C.C. training is compulsory for all students.

Silpayatana, Belur

Silpayatana, also owing its existence to the initiative of Ramakrishna Mission Saradapitha and located within the same campus,

[1] For a detailed description of the Howrah Homes, see Chapter XV on Public Life and Social Service Organizations.

is a free Junior Technical school for boys of 14 years and above. Humanities, basic science, engineering studies and workshop practice form the curriculum which runs for three years. The school was started in January 1963 as a fully residential institution with a roll strength of 68 which rose to 139 in 1964-65.

Silpavidyalaya, Belur

Silpavidyalaya, the last of the three technical institutions run by Ramakrishna Mission Saradapitha within the Math campus at Belur imparts free training to deserving students in electric wiring, electroplating, auto-mechanics, welding, turning, fitting, carpentry, weaving and tailoring. Certificate courses in all the subjects run for three years. The institution had 84 students in 1964-65.

Howrah Polytechnic Institute, Dalalpur

The newly built Howrah Polytechnic Institute at Dalalpur is due to open at the end of 1967. Constructed at a cost of Rs. 30 lakhs, the buildings stand on a 21-*bighā* plot of land donated by the Howrah Improvement Trust. It will teach a 4-year short course in Mechanical Engineering including 2 years' practical training in factories. There will be 50 seats for students intending to take up the Licentiate course in Mechanical and Structural Engineering. The institute also plans to open a Junior Technical school in the future.[1]

Commercial schools

There is quite a number of part-time commercial schools imparting lessons in type-writing, shorthand, rudiments of book-keeping and accountancy in the urban areas of the district. Certificates of merit awarded by these vocational institutions are generally given some credence by the employers.

EDUCATION IN FINE ARTS

The district does not enjoy a reputation for the cultivation of visual arts, music or dancing. The only distinction that it can perhaps claim in this field is that the ancestral home of the famous painter Nandalal Bose was in the village of Banupur in Sankrail police station. There is no important institution in the district imparting training in any branch of fine arts on a professional level. Since the late forties of the present century, several privately managed institutions for teaching Bengali songs and rudiments of instrumental and North Indian classical vocal music have come up mainly in the urban areas of the district which are tolerably good for beginners but fall far short of professional standards.

ORIENTAL SCHOOLS & COLLEGES

Traditional educational institutions like *ṭōls*, *pāṭhsālās*, *chatuspāṭhis* and *mādrāsāhs* have already been dealt with earlier in this chapter. It will be sufficient to mention here that in 1964-65 there were 87 *ṭōls* and *chatuspāṭhis* and 6 *mādrāsāhs* in various stages of progressive decline in this highly industrialized district.

[1] Other facilities for technical education available in Howrah district have been dealt with in Chapter V on Industries.

EDUCATION FOR THE HANDICAPPED

Excepting the Howrah Vagrants' Home, which runs short-term vocational and trade courses for its inmates, there is no other institution in the district providing education to physically and socially disabled persons. Activities of this Home have been described in Chapter XV.

SOCIAL EDUCATION

Until recently, social education in its various spheres largely depended on private efforts resulting in the formation of several voluntary organizations, the more important of which have been dealt with in the section on libraries and museums in this chapter as also in Chapter XV. After Independence, the State Government took upon itself the responsibility for the spread of education through the Education Extension Programme under the Community Development Project and the Social Education Programme sponsored by the Education Department, aiding at the same time such deserving private organizations as were rendering meritorious service in the field. The Social Education Programme aims at imparting such fundamental education to the rural people as would make them capable of playing leadership roles within their immediate communities as also in the larger society. The programme is directed not only towards academic or vocational training but also aims at remodelling the social attitudes of the villagers and is implemented through literacy centres, social education centres, school-cum-community centres, night schools, folk entertainment units and libraries.

Jnanasikshamandira, Ramakrishna Mission Saradapitha, Belur

Of the more important privately-managed social educational institutions in the district, mention may be made of Jnanasikshamandira, run by the Ramakrishna Mission Saradapitha within the Math campus at Belur. Started in 1949, the institution has an adult education unit which runs six night schools, both in urban and rural areas. The unit also runs a textbook library and employs a science teacher who visits schools to impart training in rudimentary science. In 1965-66 the roll strength of the six night schools was in the region of 250. The Jnanasikshamandira also maintains a fully equipped mobile audio-visual unit which shows educational films and holds lectures in the rural areas. In 1965-66 it exhibited 116 films seen by about 64,670 persons. The central library of the institution has a collection of 16,006 books which are distributed to the readers through its lending section, mobile van unit, book-kit unit and bicycle squads. The Narendranath Memorial Hall is used for holding meetings, study circles, dramatic performances etc. The health and hygiene unit serves nearly 200 school children with free nutritious tiffin everyday and distributes milk (supplied in powdered form by UNICEF) through 39 centres throughout the district. The institution is largely maintained by grants provided by the State Education Directorate.

Ananda Niketan Samaj Siksha Kendra, Nabasan

Ananda Niketan Samaj Siksha Kendra at the village of Nabasan (P.S. Bagnan) run by the Ananda Niketan Society, a voluntary social service organization, is devoted to the promotion of literacy especially among the Scheduled Castes of the neighbourhood. It is recognized as an adult education centre under the Social Education Programme of the State Government and received a grant of Rs. 2,336 in 1965-66 from the Tribal Welfare Department.

Many of the libraries of the district like Sabuj Granthagar (established in 1945) at the village of Nijbalia, P.O. Patihal, and Rabindra Pathagar (established in 1953) at the village of Kultikari, P.O. Sasati, also function as social service centres through organizing night schools and adult education centres etc. The more important of them have been described in the following section on libraries and museums.

Learned societies

Many of the libraries and museums in the district function mainly as cultural organizations. The Baly Sadharani Sabha at Baly, the Indian Association at Uluberia and the Anusilan Samity at Phuleswar all ran libraries but they also functioned as learned societies in promoting primary and secondary schools, libraries and reading rooms, debating clubs and study circles, night schools and adult education centres in their respective areas. All these associations are now defunct; those in existence have been described in the section on libraries and museums in this chapter as also in Chapter XV.

Samskrita Sahitya Samaj, Howrah

The Howrah Samskrita Sahitya Samaj, a non-official learned society, is located in its own premises not far from the office of the Howrah Municipality. The Samaj has a rich collection of some 6,000 volumes of manuscripts on *Āyurveda* (medicine), *Jyotisha* (astrology), *Vyākarana* (grammar), *Alaṁkāra* (rhetoric) and *Sāhitya* (literature), the earliest of which are said to be 500 years old. Most of them are written on palm leaves or handmade paper and many are yet to be catalogued properly. The organization receives occasional grants from the State Government but the amounts are quite insufficient to meet the needs of preservation of these invaluable documents. The Samaj is also engaged in the spread and revival of Sanskrit learning for which it runs a centre where qualified teachers impart lessons in Sanskrit in various fields of oriental studies. Teachers are also sent out to the 87 recognized (by the Bangiya Samskrita Siksha Parishad) and another hundred or so unrecognized *ṭôls* and *chatuspāṭhis* still operating in the district.

LIBRARIES

Like other educational and cultural institutions, libraries grew mostly in the urban (municipal) areas of the district now falling within the limits of the Howrah Corporation. Of the 8 libraries established in the district between 1878 and 1899, 6 were in Howrah city itself. The table below would give an idea of the distribution of libraries between rural and urban (municipal) areas of the district.

DISTRIBUTION OF LIBRARIES IN RURAL & URBAN AREAS OF HOWRAH DISTRICT

	No. of libraries		Average area (in sq. miles) covered by a library	
	1955-56	1965-66	1955-56	1965-66
Total area of the District (560.1 sq. miles)	196	256	2.82	2.1[illegible]
Rural (544.1 sq. miles)	146	187	3.72	2.90
Urban (Municipal) (16.0 sq. miles)	50	69	0.32	0.23

Judged on the basis of area alone, the libraries of the district would appear to be much more concentrated in the urban (municipal) areas.

But the distribution of library facilities among literate and educated persons in the urban and rural areas of the district is a better index of their efficacy. Let us then measure the availability of library facilities to the literate and the educated in urban and rural areas of the district in 1955-56 (population data based on the Census of 1951) and in 1965-66 (population data based on the Census of 1961). It may be recalled that in the decade between 1951 and 1961, the growth of literacy recorded in the urban areas of the district was 0.60 per cent per annum and that in the rural areas was 0.56 per cent per annum.

DISTRIBUTION OF LIBRARY FACILITIES AMONG THE LITERATE & EDUCATED PERSONS IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT

	No. of educated & literate persons		No. of educated & literate persons per square mile		Libraries per square mile		No. of educated & literate persons served by each library	
Sector	1951	1961	1951	1961	1955-56	1965-66	1955-56	1965-66
Urban	1,68,687	3,17,747	10,542.9	19,859.1	3.12	4.31	3,373.7	4,605.0
Rural	2,85,662	4,34,581	525.1	798.8	0.26	0.34	1,956.6	2,323.9

The preceding table shows that literate and educated persons in urban areas enjoy better library facilities than their counterparts in rural areas of the district.

An even better index of distribution of library facilities would be the per capita availability of library facilities among the literate and the educated in rural and urban areas of the district. On March 31, 1966 there was a total of 5,42,637 books in the 256 libraries in the district, or an average of 2,120 books per library. But 12 libraries out of the 15 in municipal areas had more than 5,000 books each and the average number of books in all these 15 libraries was 4,044. Contrasted against this, each rural library had, on an average, only

1,445 books. On 31.3.66 there were 8.52 library books for every literate or educated person in the municipal areas of the district, the corresponding number in the rural areas being 6.25. It will thus be seen that as regards availability of library facilities, the urban municipal areas have a little edge over their rural counterparts in the district. This is also evident from the following table.

LIBRARY FACILITIES AVAILABLE TO LITERATE AND EDUCATED PERSONS IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT: 1965-66

	District	Rural	Urban
Total libraries	256	69	187
Total books	5,42,637	2,71,658	2,70,979
Average No. of books in each library	2,120	1,445	4,044
Total of literate & educated persons (based on Census 1961)	7,52,328	4,34,581	3,17,747
Number of books per 100 literate & educated persons (population based on Census 1961)	73.89	62.51	85.28

Sibpur Public Library

Established in 1878 the Sibpur Public Library at 178 Sibpur Road, Howrah is the earliest of such instirutions existing in the district. On March 31, 1966, it had a total collection of 28,235 books—the largest for any public library in the district--and 537 members in its lending section. Access to its reading room, which is well-stocked with periodicals of general interest published in India, is free to the public. Managed by an executive committee, the library receives occasional grants from the State Government. It is affiliated to the Bengal Library and the District Library Associations.

Bantra Public Library

The Bantra Public Library at 42/3 Lakshminarayan Chakravarti Lane, Howrah was established in 1884 and is the second oldest library in the district. In March 1967, it had a total collection of 20,500 books--the third largest among public libraries in the district. Of this collection, the general section has 17,500 and the juvenile section 3,000 volumes. There are about 1,400 members in the former and 150 members in the latter section. The free reading room is well-stocked with periodicals of general and literary interest published in India. The lending section and the reading room remain open for 29 hours a week. The library is housed in its own double-storied building constructed in 1953 through voluntary contributions made by some private individuals. It gets occasional grants-in-aid from the State Government and is affiliated to the Bengal Library and the District Library Associations. The cultural section of the library organizes debates and lectures on literary and socio-political issues. The social education section holds classes for teaching Hindi and for coaching needy college students also holds lectures on subjects of popular

interest. There is also a women's section for vocational training in various handicrafts for Lady Brabourne Diplomas. The students are generally from low-income groups. The sports wing organizes indoor and outdoor games and the juvenile section arranges debates, recitations, essay and general knowledge competitions among school students. The library also runs a nursery, a kindergarten, a primary and a higher secondary school. -

Baly Sadharan Granthagar

Baly Sadharan Granthagar at 176 Grand Trunk Road, Baly was established in 1885 by the amalgamation of two small libraries started in 1883 at the Goswamipara and Pathakpara localities of the town. The initial name of the institution was Boys' Association which was changed to Baly Public Library in 1913. The present name was adopted in 1933. For its growth the library owes a great deal to the Baly Municipality and the Baly Sadharani Sabha. The latter organization had been the fountain-head of all cultural, social and educational activities in the township. In 1924 the library moved into its own building from its erstwhile locale at the Rivers Thompson School (now Baly Santiram Mahavidyalaya). The construction of the building could not, however, be completed before 1966 due to shortage of funds. An Executive Committee runs this privately managed library which is recognized by the State Government from which it receives occasional grants-in-aid and similar assistance from the Government of India for its children's section. It also enjoys the recognition by the Bengal Library and the Howrah District Library Associations.

In March 1967 the library had a total collection of 14,500 books and 268 subscription paying members. The free reading room, called the Santiram Patha-kendra after the name of a benefactor, remains open for an hour and a half daily. The children's section was opened in 1955. Besides providing reading facilities to its juvenile patrons, it also holds story telling sessions, classes for teaching patriotic songs, dramatic performances, recitation, extra-mural crafts training and painting. The Kishore Bibhag or the school students' section organizes debates and discussions on cultural, social and economic problems of current interest. The members of this section also puts up an educative exhibition once a year. The Executive Committee of the library arranges from time to time lectures on educational, social and cultural topics by persons eminent in the respective fields.

Mahiari Public Library

Mahiari Public Library in the village of Mahiari (P.S. Domjur) is the second oldest library in the rural areas of the district. It was founded at the instance of some private individuals in A.D. 1886 and is now housed in its own building. On March 31, 1967 it had 8,746 books and 312 members in its lending section. The free reading room stocks periodicals and journals of general and literary interest. It is affiliated to the Howrah District Library Association and receives grants-in-aid from the State Government.

Makardaha Saraswat Library

Makardaha Saraswat Library in the village of Makardaha (P.S. Domjur) is the oldest existing library in the rural areas of the district. It did not, however, have an uninterrupted growth; it was originally opened in 1885 but had to be closed down after some years and was resurrected in 1919. Housed in its own building, it had 4,602 books and 150 subscription paying members on March 31, 1966. As a recognized public library it receives occasional grants-in-aid from the State Government.

Friends' Union Library

Friends' Union Library at 106 Netaji Subhas Road, Howrah was established in 1889. On March 31, 1966 it had 7,249 books which are allowed to be used free by its members. It is affiliated to the Howrah District Library Association and receives occasional grants-in-aid from the State Government.

Raspur People's Library

Raspur People's Library in the village of Raspur (P.S. Amta) was founded in 1889. It suffered heavy damage during the floods of 1920. Housed in its own building, it had a total collection of 1,600 books and 58 members in the lending section in March 1967. Its reading room is accessible to all free of charge. It is affiliated to the Howrah District Library Association and is recognized by the State Department of Education as a Rural Library.

Howrah Sporting Club Library

Howrah Sporting Club Library at 8 Nityadhan Mukherji Road, Howrah was established in 1889. On March 31, 1966 it had 3,794 books and 140 members in its lending section. The free reading room stocks journals and periodicals in English and Bengali on general, literary and sports subjects.

Belur Public Library

Belur Public Library at 3 Lalshire Road, Baly was established in 1895. On March 31, 1966 it had 1,940 books and 407 members in its lending section. Its free reading room is equipped with English and Bengali journals and periodicals on general and literary subjects.

Ramkrishnapur Saṁsad Library

Ramkrishnapur Saṁsad Library at 119 Ramkrishnapur Lane, Howrah was founded in 1900. On March 31, 1966 it had a collection of 22,415 books, the second largest in the district, next only to that of the Sibpur Public Library. Its subscription paying membership stood at 329 on the same date. The well-stocked reading room is free to the public.

Santragachhi Public Library

Established in 1916, the Santragachhi Public Library at 20/2 Ramcharan Sett Road, Howrah had 15,615 books and 555 subscription paying members on 31.3.1966.

Madhav Memorial Library

Madhav Memorial Library at 18 Salkia School Road, Howrah was opened in 1917 and had a collection of 14,000 volumes in March, 1967 when the membership in its lending section was 450. Access to its spacious reading room is free, where readers can consult books and periodicals of general and literary interest in Bengali and English, published mainly from India. The library with a three-storied building of its own is under a Trust, its day-to-day activities being carried on

by an elected Managing Committee. It is affiliated to the Howrah District Library Association and receives grants-in-aid from the State Government and the Howrah Corporation. Its juvenile section caters to the needs of extra-curricular studies of boys and girls aged between 5 and 18 years. The library has lately opened a technical section with books on applied sciences and technology which are not usually lent out but can be consulted at its free reading room. In a highly industrialized city like Howrah this innovation fulfils a useful socio-economic purpose. It also functions as a cultural organization by arranging recitations, debating and essay competitions and lectures by well-known specialists on various subjects.

Bishnupada Smriti Pathagar

Bishnupada Smriti Pathagar at 4 Panchkori Mohanta Lane, Salkia Howrah came into existence in March, 1934 and continued as a juvenile library till 1941 when a section was opened for adult readers. In March, 1967 the library had 10,100 books and 389 subscription paying members on its rolls. The spacious and well-stocked reading room is free to the public. The building in which the library is housed has been made available free of rent by a benefactor who also foots the electricity bills. The library receives a recurrent grant from the State Government and another from the Howrah Corporation.

Gobardhan Sangit O Sahitya Samaj Granthagar

Established in 1912, the Gobardhan Sangit O Sahitya Samaj Granthagar at 12 Sibgopal Banerjee Lane, Howrah had, on March 31, 1916, a total collection of 9,422 books and 524 subscription paying members.

Duke Public Library

Duke Public Library at 4 Church Road, Howrah was opened in 1914 and had 7,660 volumes and a membership of 106 on March 31, 1966.

Maju Public Library

Started in 1902, the Maju Public Library at the village of Maju (P.S. Jagatballavpur) is one of the important rural libraries of the district. It is housed in its own building which also accommodates a free reading room. In March 1967, it had a total collection of 7,820 volumes and a membership of 201. The library possesses many rare books and journals. It is affiliated to the Howrah District Library Association and gets an annual maintenance grant from the State Government.

Rajganj Public Library

Rajganj Public Library in the village of Banipur (P.S. Uluberia) was opened in 1919. In 1954 it came to be recognized as a Rural Library by the State Education Department which supplemented the fund locally raised for the construction of a building to which the library was shifted in 1964. On March 31, 1967 it had a collection of 5,850 books and 158 members in its general section and 21 members in its children's section. Access to the reading room is free. It is affiliated to the Bengal Library and the Howrah District Library Associations.

Among other important libraries in the district are: (1) Howrah Assembly Library at 24 Kalaikundu Lane, Howrah which was

founded in 1925 and had 6,454 books and 200 lending section members in March 1966; (2) Students' Library at 354 Grand Trunk Road (North), Howrah founded in 1932 and having 5,045 books and 175 members in its lending section on March 31, 1967; (3) Khurut Bani Sangha at 305 Netaji Subhas Road, Howrah established in 1932 and having 6,000 books and 246 members in March 1967; (4) Gangadharpur Vivekananda Granthagar in the village of Gangadharpur (P.S. Panchla) founded in 1907 having 4,000 volumes and a membership of 70; (5) Sabuj Granthagar, a Rural Library at the village of Patihal (P. S. Jagatballavpur), established in 1945 and having a collection of 5,000 books and some 10,000 volumes of periodicals; (6) Bharat Pathagar at 27 Ananda Prasad Banerji Lane, Howrah established in 1947 and having 3,658 books.

Howrah District Library Association

Established in 1952 the Howrah District Library Association at 5/4 Mahatma Gandhi Road, Howrah has been the parent organization of the Howrah District Central Library which was inaugurated in 1954 in its own building constructed on a 10-*kāṭhā* plot of *khās* land allotted by the State Government. Besides functioning in the latter capacity under the integrated library service scheme included in the social education programme of the State Government, the Association also acts as the co-ordinating agency for the Public Libraries, Rural Libraries and Library Centres in the district, almost all of which in the district are its members. The Central Library, besides keeping its constituents supplied with books, maintains a free reading room, well supplied with newspapers and periodicals of general, literary and sports interests.

The District Library Association in collaboration with the District Central Library runs a short course in librarianship for training librarians already working in the various libraries of the district. In 1955, the District Central Library opened a mobile wing with a van especially designed for the purpose and purchased from the funds provided by the Social Education Section of the State Education Department. The vehicle can carry 2,500 volumes at a time and serves 16 centres, namely Ghoshpara, Jagadispur, Bhattanagar, Baksara, Rajgunj, Mahiari, Makardaha, Domjur, Bargachhia, Munshirhat, Amta, Sankrail, Bauria, Uluberia, Bagnan and Ramnagar. The Central Library has a collection of 6,500 books and subscribes to more than 30 periodicals in English and Bengali, published mainly from India. Besides occasional subventions it receives recurrent grants for meeting establishment and maintenance expenditure. In 1955-56, such grants from the State Education Department amounted to Rs. 12,140 which rose to Rs. 18,313 in 1965-66.

The direct expenditure incurred by the State Government in 1965-66 towards maintaining the libraries in the district under the Social Education Programme, including recurrent and non-recurrent grants, was as follows:

	(Rs.)
Grants to the District Central Library	18,813
„ „ „ Public (aided) Libraries	15,000
„ „ „ Library Centres	4,500
„ „ „ Rural (aided) Libraries	70,727
Total of direct expenditure by the State Government	1,09,040

MUSEUMS

Ananda Niketan Kristisala

Ananda Niketan Kristisala, run by the Ananda Niketan Society at Tenpur-Nabasan, a village in Bagnan police station on the Calcutta-Bombay National Highway, is perhaps one of the best privately managed museums in the rural areas of West Bengal. Considering the fact that besides getting a small grant from the Tribal Welfare Department of the Government of West Bengal, the institution receives no financial aid from the government or any local body, the achievement of the Society is very praiseworthy indeed. The museum building was constructed largely with voluntary labour and small donations from local patrons. The building, however, is not specifically meant for the museum. The Tribal Welfare Department granted in 1960-61, a sum of Rs. 4,000 for the Social Education programme of the Ananda Niketan Society, out of which the building was built (it was a building grant). The museum was opened on January 14, 1961 with gifts made by private collectors. For its collection the museum still depends partly on gifts from others and donations from individuals.

The museum is devoted to art, archaeology (and so. incidentally. history) and folk arts and crafts of South West Bengal. Its exhibits include terracotta plaques from early and late medieval temples, free standing terracotta figurines, toys, dolls and ritual objects from the late ancient period to the present times including folk objects of timeless style. These as well as nearly sixty of the cast copper coins of the ancient period and ten late medieval coins with Arabic and Persian legends have mostly been found in the Howrah district itself and from the neighbouring districts of Midnapur, Hooghly and 24-Parganas. There are also a few other coins from other parts of India. Stone sculptures in the possession of the Museum are mostly small specimens found from different parts of this district of which the main bulk comes from the Harinarayanpur-Mugkalyan and Bachhari sites. These are chiefly products of the Pala-Sena schools of the 10th to the 13th century. There is also a collection of votive terracotta sealings, with inscriptions in Proto-Bengali characters of the Sena period, found from the Harinarayan-Mugkalyan and Bachhari areas. Both in terracotta and in stone as also in metal there are some brick-a-brac along with authentic specimens. Metal sculptures are mostly folk-art objects, such as Dhokra *cire perdue* castings of contemporary

times. The paintings include a few *Jādu-pats*, both of scroll and frame varieties, and a few *patas* or wooden book covers with tempera paintings in pseudo-Orissan elevated folk style. In the none-too-rich textile collection, there are a few beautiful *nakshi-kāthās* or designed quilts of special variety. The museum also possesses 126 old Bengali and Sanskrit manuscripts.

Perhaps due to a shortage of funds, the preservation and display arrangements leave much to be desired. The museum has the voluntary services of a trained curator and its energetic workers organize in the museum from time to time guided lecture tours for local students and popular lectures by eminent archaeologists, art-historians and others. The museum publishes a half-yearly journal in Bengali called *Anandam* which contains serious articles on art, archaeology, history and the folk expressions of the Rāḍha region in general and of the Howrah district in particular. There is also an attached library which, on March 31, 1967, had 2,382 books mostly on the history, archaeology and folklore of Bengal.[1]

Sarat Smriti Saṁgrahasala

Sarat Smriti Saṁgrahasala in the village of Panitras in Bagnan P.S. came into existence in 1959, through private endeavours. It started with gifts from individual collectors and still depends on such munificence as also financial assistance from patrons. The museum is housed in a corner of the Sarat Smriti Mandir library, built with funds provided by local benefactors as also by the Education Department of the Government of West Bengal. The museum does not have any staff of its own and the librarian of the Sarat Smriti Mandir Library looks after it. For lack of finance, the preservation and display arrangements are far from adequate.

The museum contains some personal relics of the Bengali novelist Sarat Chandra Chattopadhyay and has a good collection of original manuscripts by him. The terracotta collection includes plaques from early and late medieval temples, household utensils of uncertain antiquity, free standing terracotta toys and dolls, mostly of folk origin in timeless[2] idioms, from the Howrah, Midnapur and 24-Parganas districts. There are some interesting stone sculptures from the Harinarayanpur-Mugkalyan and Bachhari sites within Syampur police station which may be ascribed to the Pala-Sena period. Besides a few wooden toys of folk origin, the museum also possesses a number of old Bengali manuscripts, the most ancient of which cannot perhaps be dated beyond three hundred years from now.

Sarat Smriti Mandir Pathagar, named after Sarat Chandra Chattopadhyay and housed in the same building, was established in 1956 through the endeavours of the local people. Recognized as a Rural

[1] For information on other activities of Ananda Niketan Society, see Chapter XV on Public Life and Social Service Organizations.

[2] Timeless and time-bound are two concepts of art-form enunciated by Dr. Stella Kramrisch. She uses the epithet 'timeless' in connexion with folk-art.

Library since 1962, it receives a yearly grant-in-aid of Rs. 1,900 from the State Government under its Social Education Programme.

INDIAN BOTANIC GARDENS, SIBPUR

Howrah district has the unique distinction of having the largest botanic garden in India and one of the largest in Asia. The Indian Botanic Garden (formerly called the Royal Botanic Garden) is situated within the Sibpur police station, just outside the limits of the Howrah municipality and on the right bank of the Bhagirathi. It spreads over an area of 273 acres.

History of the Garden

"The circumstances which led to the establishment of this garden are interesting. During the second half of the eighteenth century, when the East India Company was more or less running the administration of Bengal, there was a period specially marked by vagaries of the weather and successive crop failures which left India in the grip of a very serious famine. This resulted in widespread loss of human lives and left a deep mark on the minds of the administrators. They were on the look out for some substitute or supplementary food plants which could be utilized and grown in poorer soil and which would not normally require a lot of attention."[1] At that time one Lieutenant Colonel Robert Kyd of the Bengal Army, Military Secretary to the then Governor of Bengal and a man distinguished for his botanical researches, having his own research garden at Shalimar in the neighbourhood, suggested to the Government in Calcutta in June, 1786 for the establishment of a "nursery for growing a number of such plants as well as a number of spice-yielding plants in which the Company was trading at that time. It was also suggested that the nursery should grow teak trees which would yield the necessary timber for the repair of Company's ships."[2] The proposal was duly approved by the Court of Directors and the establishment of this nursery sanctioned. In their letter of approval dated July 31, 1787, they wrote: "In the cultivation of the cinnamon tree in particular, we foresee a great source of wealth to the Company and of population and opulence to the provinces under your administration."

"Col. Kyd was entrusted with the task of finding suitable land on the western bank of the river Hooghly and he selected an area near the Muggah Thana (at present called Thana Makua) where an old fort and barracks...formerly stood. This fort fell to the British under the leadership of Lord Clive at the time of the recapture of Calcutta. The condition of this part of the ground was at that time more or less in a state of perfect jungle and was subject to the overflow of the tide."[3]

After the selection of the site, the Government formally granted

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[1] D. Chatterjee—The Indian Botanic Garden, in March of India. New Delhi, 1960.

[2] George King—A Guide to the Royal Botanic Garden: Calcutta, 1895. pp. 1-2.

[3] D. Chatterjee—loc. cit.

the 262 acres or 786 *bighās* of land to the proposed botanic garden. "Col. Kyd arranged to dig a deep trench around this land and also erected a fence. He then started to lay the garden and the commercial planting of some of the spice-yielding plants like cinnamon, black-pepper, cardamom, etc. He also planted Persian dates, cherries, oranges, teak and sandal-wood and other trees. . . .As was to be expected, many of these plants did not survive on account of the unsuitable climate and soil of Bengal. Thus was the Botanic Garden established in 1787"[1] with Col. Kyd as its first honorary Superintendent. He worked for about six years and died on May 26, 1793. In 1795 an obelisk was raised to his memory within the garden by one of his relations.

Col. Kyd was succeeded by Dr. William Roxburgh who was appointed a salaried Superintendent on November 29, 1793. Prior to this appointment, he was Company's Botanist in Madras. "Dr. Roxburgh for many years prior to his transfer, had been engaged in studying the then little known flora of the Northern Circars in the Madras Presidency. He was a most ardent and enthusiastic botanist, and a good gardener. Dr. Roxburgh continued to be Superintendent until 1813."[2] He died in 1815 in his native Scotland. A simple monument near the Great Banyan Tree at the Garden perpetuates his memory. "Dr. Roxburgh was the first botanist who attempted to draw up a systematic account of the plants of India. During his busy life in this country he prepared a *Flora Indica*, which contained systematic descriptions of all the indigenous plants known to him, as well as many exotics then in cultivation in this Garden and in the neighbourhood of Calcutta (he listed about 3,500 plants which grew at that time in the Garden). The manuscript of this work he took with him when he left India, intending to publish it. His death prevented the execution of this plan; and with the exception of the first volume, which was printed (in two parts) with some additions and interpolations by Drs. Wallich and Carey in 1820, the work remained unpublished until 1832. In the latter year it was printed, exactly as the author had left it. This book is the basis of all subsequent Indian botanical works. Besides the *Flora Indica*, Roxburgh published, at the expense of the Honourable Company, in three large folio volumes, his *Plantae Coromandelianae*, being a description with figures, of 300 of the most striking plants of the Coromandel Coast."[3] He has rightly been called the father of Indian Botany.

Under the influence of a man of science like Dr. Roxburgh and his close associate and friend Dr. Koening, who used to send specimens of plants from South India to botanists like Linnaeus and Retzius in Europe, the original commercial objective of the Garden was

[1] George King—loc. cit.
[2] George King—op. cit. pp. 1-3.
[3] George King—op. cit. pp. 2-4.

gradually relegated to be background and the more scientific task of obtaining plants from remote parts of India and their description, classification and scientific study became more and more important.[1]

Up to the time of Dr. Roxburgh there was no residential building within the Garden either for the Superintendent or for any other officer. The need for such a building was not originally felt as Col. Kyd had his own garden-house near-by. With the approval of the East India Company Dr. Roxburgh completed the construction of the Superintendent's quarters in 1795 at a cost of Rs. 15,000. The site of the house was admirably chosen on a land projecting partly into the river. Even after more than 170 years of its construction, it is in an excellent state of preservation.

Dr. Roxburgh was succeeded by Dr. Francis Buchanan (later Sir Francis Buchanan Hamilton), the well-known naturalist and field survey worker, who, besides compiling the first series of gazetteers for the Bengal districts also wrote on a number of subjects including botany, geology, agriculture, land tenure etc.

In 1817 Dr. Nathaniel Wallich succeeded Dr. Francis Buchanan Hamilton. He was of Danish origin and was lately Surgeon to the Danish settlement at Serampore. "Dr. Wallich was an able and most energetic botanist, who during the earlier part of his term of office organised collecting expeditions into remote and the then little known regions of Kumaon, Nepal, Sylhet, Tennasserim, Penang and Singapore. Dr. Wallich, in fact, undertook a botanical survey of a large part of the Indian Empire. The materials (in shape of dried specimens of plants) thus accumulated were taken by him to London; and after being named there by himself and by other botanists, they were distributed in numbered collections to the leading botanical institutions in Europe. The liberty with which these specimens were given away was so extreme that the herbarium was completely denuded of every specimen collected during the first fifty years of the existence of the Garden. . . .Dr. Wallich was enabled through the munificence of the Honourable Company, to publish, under the title *Plantae Asiaticae Rariores*, three superb volumes illustrated by coloured figures."[2] Dr. Wallich retired in 1846. Dr. William Griffith officiated as Superintendent during Dr. Wallich's absence on leave, but he died in Malaya in 1845 while on a botanical expedition. Dr. Wallich was succeeded by Dr. Hugh Falconer, a palaeontologist who held office till 1855. The next Superintendent was Dr. Thomas Thomson, a traveller and botanist of renown who assisted Sir Joseph Hooker in the collection and distribution of a extensive and well-known herbarium of East Indian plants and was the joint author of the first volume of a new *Flora Indica*. He retired in 1861 and was succeeded by Dr. Thomas Anderson whose untimely death in 1870 was caused

[1] D. Chatterjee—loc. cit.

[2] George King—op. cit. pp. 4-5.

by a disease contracted during his exertions to introduce the cinchona plant into the Darjeeling Himalayas. He was also the first Conservator of Forest of Bengal and the officer-in-charge for introduction and cultivation of cinchona in India. C. B. Clarke, F.R.S., an officer of the Education Department greatly interested in Indian botany, acted as the Superintendent during 1869-71. He was one of the important collaborators of Sir Joseph Hooker in the compilation of the latter's famous work *Flora British Indica.*

"In 1864 came the great cyclone of Calcutta. It was accompanied by a huge tidal bore from the river Hooghly that laid the greater part of the Garden under water, in some places to a depth of six to seven feet, and carried two ships inside the Garden with great violence. This resulted in destruction of nearly 1,000 trees and innumerable herbs and shrubs. The destruction was such that more than half of the trees and shrubs were completely lost. Three years later another cyclone came and destroyed over 750 of the surviving trees.

"In 1871, when Dr. (afterwards Sir George--Ed.) King, F.R.S., joined as the Superintendent of the Garden, the whole area was in a miserable state. The devastation brought about by two successive cyclones had practically ruined the whole Garden and in many places swampy growths of grass began to develop. Most of the roads were narrow and unfit for any vehicular traffic and the present artificial lakes were almost all absent. Dr. King set his heart to reorganize the Garden, and he achieved this after considerable hard work and careful planning. A number of artificial lakes were excavated and with available earth he succeeded in raising the general level of the garden. Many trees were planted and he tried to group them together on a geographical basis i.e., typical trees of a particular country were planted close to each other. He also started the publication of the journal known as the *Annals of the Royal Botanic Garden, Calcutta* in the year 1887. He was also responsible for the establishment of the Botanical Survey of India in 1890 with the object of surveying in detail the vegetable covering of the country. Dr. King thus was able to bring back the lost glory of the Garden which once again began to draw the attention of visitors and scientists from far and near."[1]

Dr. King was succeeded by Sir David Prain, the author of *Bengal Plants,* who made over charge as Superintendent to Col. A. T. Gage who was succeded by C. C. Calder. On the latter's retirement Dr. K. P. Biswas stepped in as the first Indian Superintendent of the Garden and on his reaching the age of superannuation in 1955, Dr. D. Chatterjee assumed charge of the office. He was killed under tragic circumstances in 1960 when Dr. J. Sen succeeded him. On January 1, 1963, the Botanical Survey of India assumed full control

[1] D. Chatterjee—loc. cit.

of the Garden and the post of Superintendent was abolished. Since then a Deputy Director of the Survey acts as the head of the Garden.

Functions and structure of the Garden

"The Garden is responsible for the introduction of a number of desirable plants in India from various countries. The most important is perhaps the cinchona (from the Andes) which yields the quinine. Large-scale production of quinine and its use in a malaria infested country like India has saved millions of human lives. ... Plants of para-rubber were introduced in 1874."[1] Other economic plants first tried out in the Garden are vanilla, flax hemp, henbanc, baobab, carob, eucalyptus, paper-mulberry, nutmeg, cloves, cinnamon, black-pepper, cardamom, tapioca, cocoa, jalap, mangosteen, potato, tobacco, coffee (Arabian and Liberian) and many others. In the field of horticulture, many exotic trees and plants have been introduced in the country through the agency of this garden. The giant water-lily *victoria regia* was brought over from the Amazon in 1887 and still flourishes here. Teak, mahogany and *sisal* plants were also introduced by the Garden.

"The introduction of tea was one of the items put down in Colonel Kyd's original programme, and the garden bore a most important part in the final establishment of what has now become one of the most important industries in Northern India. 'Among its greatest triumps', wrote Sir Joseph Hooker, 'may be considered the introduction of the tea-plant from China, a fact I allude to as many of my English readers may not be aware that the establishment of the tea-trade in the Himalayas and Assam is almost entirely the work of the Superintendents of the Gardens of Calcutta and Saharunpore ' "[2] The garden authorities worked hand in hand with the Agri-Horticultural Society of India in the improvement of Indian cotton, and in the introduction of both of that and of jute to the markets of Europe. By the introduction of some of the best kinds of sugarcane from the West Indies, and the dissemination of these to all parts of the country, a considerable improvement was effected both in the quality and quantity of sugar crop of India. In this matter also the Agri-Horticultural Society worked in cordial co-operation with the Garden authorities, for soon after the establishment of the Society, some land in the Garden was made over to it rent-free, and on this land the Society conducted the greater part of its operations for forty years. In fact, it was not until 1872 that the Society's garden was transferred to its present site in Alipore.[3]

"The Botanic Garden has approximately 12,000 plants from many countries and these are growing in perfect harmony. The Garden is well laid out with numerous lakes and colourful avenues. It draws

[1] loc. cit.
[2] L. S. S. O'Malley & Monmohan Chakravarti—Bengal District Gazetteers, Howrah. Calcutta, 1909. pp. 156-57.
[3] loc. cit.

a large crowd throughout the year and specially during the winter months when the climate of Calcutta is ideal for out-door recreation and relaxation. So popular is the Garden that on festive occasions like the New Year's Day or the Christmas Day the number of visitors easily swells up to over 80,000 per day. ... The Garden has a riverfront of over a mile and this commands a wonderful view.

"There are two nurseries inside the Garden which specialize in growing ornamental and annual flower plants. There are approximately 1,500 orchid plants in the nursery and a fairly good collection of *cacti* and succulents. The Garden also exchanges plants and seeds with other botanical gardens or similar institutes. It has an up-to-date library and a small laboratory for conducting researches and scientific experiments.

"It has also a herbarium of dried, classified and named specimens of plants numbering about 2.5 million. This herbarium or collection of plants is well-known and numerous enquiries from abroad are received from those who are interested in Asiatic plants. The herbarium was started by Dr. Roxburgh in 1793 and was originally located in the Superintendent's bungalow. But as the specimens increased, a separate building was necessary and this was constructed in 1882.[1] where both the library and the present herbarium are located. Since April 1957, the major part of the collection was transferred to the control of the Botanical Survey of India."[2] The herbarium is under a Curator who looks after the enormous collection contributed by almost every botanical worker in India since its inception as also by a large number of botanists from all over the world It is primarily an Indian Herbarium but many exotic plants are also represented. Constant communication and inter-change of specimens have been kept up all along with the great Indian collection at the Kew Garden in England; with other European botanic institutions like the herbarium of the British Museum, of the Jardin des Plantes at Paris and the Imperial Gardens at St. Petersburg and Berlin; and in Asia, with the Botanic Gardens at Buitenzorg in Java and at Peradeniya in Ceylon.

"The Garden is intersected by a number of avenues named after distinguished botanists, or, occasionally, after prominent trees. Among the noticeable silvan objects are the grove of bamboos, the mahogany group, the great banyan, the Palmetum, the palm-house and the orchid-house. The finest bamboos, chiefly natives of Java, flank the Collett Avenue and the mahogany group is to be found near the middle of the Clarke Avenue. In the palm-house, an octagonal structure with a central dome some 50 feet high, there are cultivated palms and other scandent plants which cannot grow out

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[1] George King—loc. cit. gives the year as 1883.
[2] D. Chatterjee—loc. cit

of doors. The orchid house in the centre of the Garden contains beautiful specimens, mostly natives of India and Sikkim.

"The pride of the garden is the great banyan tree near its western limit. Its main trunk is 51 feet in girth at a height of 5½ feet from the ground, and it has no less than 562 aerial roots rooted in the soil. The circumference of its leafy head is 997 feet, and the diameter of the space covered by it at its longest is 287 feet and at its shortest 264 feet. It is not known exactly how old the tree is, but tradition says that it was in existence in 1782. ... Observations of the rate of growth of this tree and other trees taken since 1871 make it probable that it is even older; and this supposition is supported by the evidence of Lord Valentia, who visited Calcutta in 1803 and described it as 'the finest object in the garden, a notable specimen of the *Ficus Bengalensis*'; in fact, he visited the garden chiefly to see it.

"As regards the general appearance of the garden, the following description is quoted from Mr. Forrest's *Cities of India*: 'Trees of the rarest kinds, from Nepal and the Cape, Brazil and Penang, Java and Sumatra are gathered together in that spot. The mahogany towers there, and the Cuba palms form an avenue like the aisle of some lofty cathedral. Noble mango trees and tamarinds are dotted about the grassy lawns; and there are stately casuarinas, around whose stems are trained climbing plants. There are plantains of vast size and beauty from the Malay archipelago, and giant creepers from South America. The crimson hibiscus and scarlet passion-flower dazzle the eye, and the odour of the champak and innumerable jessamines float upon the breeze.' As Bishop Heber remarked: 'The Botanic Gardens would perfectly answer to Milton's idea of Paradise, if they were on a hill instead of a dead flat.' "[1]

In recent years, certain improvements, entailing an expenditure of Rs. 2.5 lakhs approximately, have been brought about adding to the amenities of the visitors. A large number of wooden seats have been provided at suitable points, two deep tube-wells have been sunk for the supply of potable water and a landing stage purchased and fixed on the river bank with a gangway for the convenience of those who come here by steamers. The Indian Botanic Garden is fully maintained by the Government and the present annual expenditure for its upkeep is in the neighbourhood of Rs. 4.5 lakhs.

[1] L. S. S. O'Malley and Monmohan Chakravarti—Bengal District Gazetteers, Howrah. Calcutta, 1909. pp. 159-60.

CHAPTER XIV

MEDICAL AND PUBLIC HEALTH SERVICES

SURVEY OF PUBLIC HEALTH AND MEDICAL FACILITIES IN EARLY TIMES

Any survey of public health and medical facilities available in early times in this district as also elsewhere would reveal the existence of two systems of medicines, namely the Ayurvedic and the Unani, commonly called the *Kaviraji* and the *Hakimi* systems, known in popular parlance as the Hindu and Muslim methods respectively. Apart from them, many magical rites are still performed and oblations offered to folk-gods (whose number is fairly large in the district) for effecting wishful cure of various diseases. Basanta Chandi or Sitala and Olai Chandi are still the presiding deities of smallpox and cholera and they must be appeased--so at least is the belief of the unsophisticated villagers—to keep clear of these diseases. Jwarasur similarly controls all kinds of fevers, and Panchu Thakur, children's ailments of every description. In the village of Bantul (P.S. Bagnan) on every Sunday people smear their bodies with turmeric paste, take a bath in a pond and wear another cloth leaving the wet one behind in the hope that this ritual would cure them of their maladies.

The earliest reference to health conditions in the district does not go beyond the middle of the 18th century, when the areas in the vicinity of the present Howrah city were said to have been reeking with malaria.[1] Towards the end of that century, however, things started changing for the better and "people in Calcutta, owing to their peculiar habits so opposed to the requirements of the climate, were induced to try the air of places out of Calcutta. . . . They found out-houses in places distant from the town, and one of these houses was noticed in 1780 A.D. in Tanna Fort."[2]

In a report published in the *Samāchār Durpan*, a contemporary Bengali daily, on February 13, 1830, it was stated that in the preceding year there were 6,323 outdoor patients in a Howrah hospital which also attended to 92 indoor patients during the same period.[3]

According to O'Malley and Chakravarti, the position of public health and medical facilities in the district was not very encouraging even in the first decade of the present century. Fevers of various kinds (mainly malarial), smallpox, cholera, dysentery and diarrhoea

[1] C. N. Banerjei—An Account of Howrah, Past and Present. Calcutta, 1872. pp. 18-19.
[2] ibid. p. 20. Tanna Fort stood on the site where the quarters of the Superintendent of the Sibpur Botanic Gardens stands now.
[3] Brajendranath Bandyopadhyay—*Sambādpatrey Sekāler Kathā*, (in Bengali). Vol. I. 3rd Edition. Calcutta, 1356 B.S. p. 215.

were then fairly widespread.[1] According to them, "The *Kaviraji* or native Hindu system is still much in vogue; and the patent medicines advertised in papers are fairly popular. The homoeopathic system has also many advocates and is largely resorted to for children's ailments or chronic illness. The allopathic system is, however, most favoured by the well-to-do classes, especially for surgical operations. The efficacy of quinine for the treatment of malarial fever is now pretty well understood. Among the lowest classes, however, the worship of Sitala during epidemics of smallpox, of Ola-Bibi in cases of cholera, and of Sasthi and Panchu Thakur for children's illness is still common; while simple compounds of vegetable drugs, administered by elderly females or old men, are generally resorted to for a number of diseases."[2] The medical facilities then available were as follows: "At the beginning of the present century there were seven dispensaries in the district, but one of them, the Singti Duke Charitable Dispensary, has since been closed. The following is a brief account of the public medical institutions of the district. The premier medical institution is the Howrah General Hospital, which was opened in 1861.[3] . . . The Beames Charitable Dispensary at Baly is almost entirely maintained by the municipality. In the rural tracts there are four public dispensaries, viz., (1) at Amragori, the Amragori Hazra Dispensary maintained partly by the District Board and partly from the interest on a fund of Rs. 19,000 raised by subscriptions; it is so called after Babu Iswar Chandra Hazra; (2) at Syampur, maintained partly from private subscriptions, but chiefly by the District Board; (3) at Uluberia, maintained by Government, the Local Fund and private subscriptions; and (4) at Amta, maintained by the District Board and private subscriptions. The dispensaries at Uluberia and Amragori alone have accommodation for indoor patients, the former having six beds for males, and the latter four beds for male and two beds for female patients. All the others treat only outdoor patients. In 1907 the largest number of patients was treated at the Amragori dispensary, viz., 6,540, the daily average being 42.40."[4]

Ayurvedic System

It would not be irrelevant here to give a brief resume of the Ayurvedic system of medicine which O'Malley and Chakravarti said was very popular in the district during the first decade of the present century. "About the beginning of the Christian era Ayurveda, (or Hindu Medicine), had reached its apogee and had spread far and

[1] O'Malley & Chakravarti--Bengal District Gazetteers, Howrah. Calcutta, 1909. pp. 52-59.

[2] ibid. p. 64.

[3] In 1871 in the indoor section of this hospital 1,184 patients were treated of whom 1,020 recovered, 105 died, 58 stayed in the hospital and 1 ceased to attend, and in the outdoor section 9,977 patients were treated and the average daily attendance there was 98.17% (*vide*, W. W. Hunter—A Statistical Account of Bengal, Vol. III. London, 1876. p. 440).

[4] loc. cit.

wide influencing deeply the systems of medicine in Egypt, Greece, Rome and Arabia. The influence of the Hindu Medicine was not confined to ancient and mediaeval periods alone. Through its influence on Greek medicine and through the influence of the Greek on Arabian medicine and of the Arabian on the medicine in Europe, the Ayurvedic system can well claim to be the chief, though a remote source, from which the mighty river of Western medicine has had its beginnings. In course of time, further progress on the fundamentals of medicine came to a stop, though Materia Medica (especially *Rasasastra*) and therapeutics were still being enriched. The art of surgery and knowledge of anatomy suffered a growing progressive decline, partly because of the growing prejudice against dissection of dead bodies. In spite of that, the tradition of surgery which was fostered by the Ayurvedic and Unani systems, when they came closer, was continued by a sect called JARAHS. Couching of the cataract, bone-setting, and surgical treatment of the wounded in the battles are some of the fine examples of their tradition. The introduction of Western surgery after the advance of British Rule arrested the practice of this indigenous tradition. In addition, there were political and social changes which hastened the decline. And, as is inevitable in periods of decay, people became slaves of ancient texts which were not even correctly handed-down and it came to be considered almost sacrilegious to question their authority. Independence of thought and innovation were halted."[1]

About the diagnostic methods followed in Ayurveda, Hunter had observed: "In the diagnosis of diseases, the *kaviraj* is guided by *touch, observation*, and *questioning*. He examines the pulse very minutely, and according to its beatings determines whether the air, bile or phlegm is at fault."[2] An eminent exponent of this system was Kamal Kanthabharan, a *kaviraj* who lived in village Dhasa (P.S. Jagatballavpur) in the last quarter of the 19th century. He could correctly diagnose many diseases simply by feeling the pulse of the patient and could also trace their history accurately. He used to cure carbuncles, liver diseases, abscesses, typhoid, pneumonia, phthisis, tetanus and many female diseases by administering Ayurvedic medicines. He had some very distinguished pupils following his line of treatment.[3]

The popularity of the Ayurvedic system as recently as in 1921 was attested by a Committee appointed in August of that year by the Government of Bengal to suggest practical steps for the restoration and development of this method of treatment. Its findings. *inter alia*,

[1] Government of India, Ministry of Health—Report of the Committee on Indigenous Systems of Medicine, Vol. I. Delhi, 1948. p. 2.

[2] W. W. Hunter—A Statistical Account of Bengal (Vol III). London, 1876. pp. 438-39.

[3] Bidhubhusan Bhattacharya—*Hooghly ó Howrah Jelār Itihās*, Vol. II (in Bengali). Calcutta, 1335 B.S. pp. 254-55.

were as follows: "(*i*) A very large section of the population of Bengal resort to Ayurvedic medicine, either from preference or from necessity, or from both, (*ii*) household medicine in Bengal to-day is based largely, if not entirely, on Ayurvedic medicine, (*iii*) medical relief, as at present available, falls far short of the need of the population, (*iv*) the extension of western medicine on a scale large enough to meet the full requirements of the people does not appear to be practicable on financial and economic grounds, (*v*) Ayurvedic Medicine is cheap, popular and efficacious, (*vi*) even in its present unorganized condition, it is resorted to by large masses of the population and (*vii*) organization and restoration of this system of treatment to suit modern requirements is one of the best means by which we can hope to solve the problem of medical relief to the people."[1]

According to the Census of 1961, there were 294 Ayurvedic practitioners in the district of whom 5 were females. That this indigenous system is more or less equally popular throughout the district will be borne out by the fact that 118 of the Ayurvedic physicians practised in the urban areas and 176 in the rural areas of Howrah. There is no Ayurvedic hospital in the district; a charitable Ayurvedic dispensary is, however, maintained by the Howrah Municipality at Salkia.

Unani System

The Muslims brought the Unani system with them into this country. During the mediaeval period both Ayurvedic and Unani medicines continued to minister to the needs of the people—the Muslims generally preferring the latter—but further study and growth of the respective sciences, though not their practice, however, declined. Both were in a static condition when the Western system was introduced by the British in the third decade of the 19th century. "In Unani Tibbi drugs are classified variously. In therapeutics the following classification which is based on clinical observation is generally followed: those (*a*) which act by their physical qualities, e.g., demulcents, (*b*) which act by their temperament; the temperamental quality of a medicine being the quality of heat, cold, dryness or moisture produced in the body after its absorption and metabolism, e.g., nucis-vomica is hot and dry, (*c*) which have actions on special organs, e.g., diuretics, stomachics etc. and (*d*) which have specific properties, e.g., arsenic in syphilis and sulphur in scabies. There are methods laid down for estimation of the strength and quality of the medicines and in this way they are regarded as being hot or cold in 4 degrees."[2]

In 1925 the Government of Bengal set up a committee named the Tibbi or Unani Committee which recommended that (1) an inexpensive kind of modern Tibbi School in association with an out-patients department and dispensary be started for the present at Dacca and Calcutta, if not possible at other centres, and (2) a number of selected

[1] Government of India, Ministry of Health—op. cit. pp. 32-33.
[2] ibid. pp. 171-72.

students be sent to the Tibbi Colleges at Delhi and Lucknow as Government scholars for study there, (3) that the Government of Bengal should create special Tibbi scholarships for Arabic students of the Madrassas and encourage them to take up the study of Ilm-i-Tibb in conjunction with the Arabic Madrassa curriculum and (4) that an adequate number of 'Mohsin' scholarships be diverted to the Madrassas at Dacca and Calcutta for encouraging Tibbi studies.[1] The Government of Bengal in 1941 proposed to establish a General Council and State Faculty on Unani medicine to supervise the working of the system. The Committee of Indigenous Systems of Medicine set up by the Government of India, however, observed in 1948: "We wish to clearly state our views in regard to what is generally spoken of as different 'systems' of medicine viz., Ayurveda, Siddha, Unani Tibb, Western medicine, Homoeopathy and the like. We hold that, if the aim of all of them is the same, i.e., the maintenance of health, and prevention and cure of disease, they should all be properly investigated and integrated in the form of a single system which should be capable of suitable alteration and adaptation in accordance with time and other conditions."[2]

The Census of 1961 did not enumerate the Unani practitioners in the district whose number is, therefore, unknown.

Homoeopathic system

The Homoeopathic system was introduced in Howrah town shortly after it was popularized in Calcutta by Rajendra Lal Dutta and Dr. Mahendra Lal Sircar but none of the local practitioners rose to any eminence during the last century. At the beginning of the 20th century, however, Dr. Dinabandhu Mukherjee, after whom a school, a college and a road have been named at Sibpur, built up a wide practice as a very capable Homoeopath whose mantle fell on Dr. Gangadhar Mukherjee, who started as an amateur and then became a professional in central Howrah during the twenties and thirties of the present century.[3]

The Census of 1961 enumerated 373 Homoeopaths in the district of whom 5 were females. Of them, 183 (including one female) practised in the urban and 190 in the rural areas of the district.

VITAL STATISTICS

During the last quarter of the 19th century fever epidemics were frequent in the district, and in 1881 about 50,000 persons died of the notorious Burdwan fever. Cholera and stomach diseases were also very common in the city area till the Howrah waterworks were constructed in 1896 and the town began to be supplied with filtered water. The worst affected parts of the district during 1872-81 were the three police stations of Panchla, Jagatballavpur and Amta. At the end of that decade the first two thanas suffered a decrease of

[1] ibid. p. 36.
[2] ibid. p. 7.
[3] Source: Homoeo Medical Club, Howrah.

3.4 per cent each in population, the corresponding figure for the last being 0.5 per cent.[1] With a respite in 1897-98, the fever menace continued till 1891-1901 while cholera was an annual feature before 1896. During the 1911-21 decade epidemics continued but the decrease in population figures was not perceptible.

While total demographic mobility in a given area is governed both by internal and external factors, the birth and death-rates can be more precisely attributed to internal factors alone. The following table giving intrinsic figures of births and deaths as also their rates per thousand are based on a 20-year period from 1941 to 1960.

BIRTH AND DEATH-RATES IN HOWRAH DISTRICT: 1941-60

	1941-1950				1951-1960			
	Births	Birth-rate per thousand	Deaths	Death-rate per thousand	Births	Birth-rate per thousand	Deaths	Death-rate per thousand
Male	1,28,521	8.6	1,35,072	16.2	1,37,076	8.1	81,640	8.8
Female	1,16,316	7.8	1,22,198	18.6	1,24,499	7.3	70,337	9.3

It is evident from the above table that while birth-rates during the two decades under review were more or less constant the death-rates during the latter had nearly been halved, obviously due to better medical facilities. The female birth-rates were lower but death-rates higher than those of males during both the decades.

The table[2] below shows the birth and death-rates obtaining in the urban and rural areas of the district in recent years.

BIRTH AND DEATH FIGURES FOR HOWRAH DISTRICT: 1961-64

	Births			Deaths		
	Urban	Rural	Rate per thousand (on Total)	Urban	Rural	Rate per thousand (on Total)
1961	9,370	16,540	12.6	7,112	6,978	6.9
1962	9,786	16,344	12.5	7,138	7,082	6.8
1963	6,608	17,106	11.1	3,035	8,504	5.4
1964	9,370	12,863	10.2	2,356	4,909	3.3

It appears from the foregoing table that the birth-rate has far exceeded the death-rate during recent years both in the urban and the rural areas of the district.

[1] A. Mitra—Census 1951, West Bengal: District Handbooks: Howrah. Calcutta, 1953. pp. xiii-xiv.

[2] Directorate of Health Services, Government of West Bengal—Annual Reports on the state of Health of West Bengal (Part I), 1961, 1962, 1963 & 1964.

The following table,[1] based on figures for 1964 in respect of Howrah and Baly municipal areas, shows that the most fertile age for mothers is between 20 and 24 years.

Age of mother

PERCENTAGE OF BIRTHS RELATED TO MOTHERS' AGE IN HOWRAH AND BALY: 1964

Age of mother	Percentage of births	
	Howrah Municipality	Baly Municipality
15-19	12.2	15.7
20-24	29.3	31.0
25-29	28.7	30.2
30-34	18.2	15.3
35-39	8.8	6.1
40-44	2.3	1.3
45 +	0.4	0.1

A method of analyzing mortality is to study the causes of death. The following table[2] sets forth the actual number of deaths in the district and their rates per thousand (according to the population of 1961) during 1961, 1962, 1963 and 1964.

Deaths from selected causes

DEATHS FROM SELECTED CAUSES IN HOWRAH DISTRICT: 1961-64

	1961		1962		1963		1964	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Accidents	327	0.2	333	0.2	303	0.1	207	0.09
Anaemias	240	0.1	225	0.1	136	0.06	82	0.04
Child-birth	63	2.4	47	1.8	45	1.9	32	1.4
Cholera	542	0.3	527	0.3	682	0.3	176	0.08
Diabetes	26	0.01	19	0.01	13	0.01	27	0.01
Dysentery	690	0.3	699	0.3	457	0.2	352	0.2
Early Infancy Diseases	1,619	0.8	1,271	0.6	741	0.3	617	0.3
Gastritis etc.	399	0.2	330	0.2	221	0.1	168	0.08
Influenza	113	0.1	56	0.03	11	0.01	10	—
Kala-azar	4	—	1	—	1	—	—	—
Leprosy	21	0.01	17	0.01	15	0.01	9	—
Malaria	56	0.03	39	0.02	22	0.01	8	—
Malignant Neoplasm	250	0.1	245	0.1	202	0.09	115	0.05

(contd.)

[1] Directorate of Health Services, Government of West Bengal—Annual Report on the state of Health of West Bengal (Part I), 1964.
[2] Directorate of Health Services, Govt. of West Bengal—Annual Reports on the state of Health of West Bengal (Part I), 1961, 1962, 1963 & 1964.

DEATHS FROM SELECTED CAUSES IN HOWRAH DISTRICT: 1961-64—*contd.*

	1961		1962		1963		1964	
	Deaths	Rate	Deaths	Rate	Deaths	Rate	Deaths	Rate
Metabolic & Nutritional Diseases	743	0.4	821	0.4	491	0.2	353	0.2
Pneumonia	848	0.4	901	0.4	525	0.2	330	0.2
Pulmonary T.B.	235	0.1	249	0.1	138	0.06	121	0.06
Respiratory T.B.	247	0.1	233	0.1	155	0.07	115	0.05
Senility etc.	5,877	2.9	6,239	3.0	4,612	2.2	3,495	1.6
Smallpox	26	0.01	202	0.1	1,447	0.7	111	0 05
Snake-bite	29	0.01	26	0.01	27	0.01	14	—
Suicide	67	0.03	64	0.03	48	0.02	20	—
T.B. of Meninges	11	0.01	3	—	2	—	5	—
Typhoid	183	0.1	180	0.09	158	0.07	84	0.04

The causes claiming the highest number of victims are senility etc., metabolic and nutritional diseases, pneumonia and diseases peculiar to infants. Tuberculosis of different descriptions is perhaps caused by maladjusted urbanization from which an industrial district like Howrah suffers. Typhoid, dysentery and cholera originate primarily from insanitation, another scourge of congested urban life. Incidence of smallpox, although heavy in 1963, appears to be of a temporary nature and malaria seems to have been sufficiently controlled. Deaths from suicide and accidents have an urban background, taking their toll side by side with such rural afflictions as snake-bite etc.

Infant mortality

In Howrah district, as elsewhere, children constitute the largest single component of the total population as will be evident from the following table classifying the 1961 population of the district (20,38,477) under various age-groups.

DISTRIBUTION OF THE POPULATION OF HOWRAH DISTRICT ACCORDING TO AGE-GROUPS

Age-Group (years)	Number
0-4	2,86,079
5-9	2,93,508
10-14	2,12,073
15-19	1,71,957
20-24	1,97,895
25-29	1,82,915
30-34	1,57,055
35-44	2,32,912
45-59	1,98,115
60 +	1,05,580

Because of their physical immaturity and large numbers, the mortality hazards of children are much greater than those of people in higher age-groups. The following table[1] brings out the relative proportions between total deaths and infant mortality, in the district for the 1951-60 decade.

INFANT MORTALITY IN HOWRAH DISTRICT: 1951-60

Year	Total deaths	Infant deaths	Infant death-rate per thousand live births
1951	20,292	3,956	161.6
1952	16,478	3,565	133.0
1953	16,247	3,838	149.4
1954	13,385	3,129	128.4
1955	13,724	3,230	120.0
1956	13,032	3,179	116.5
1957	17,847	3,882	146.4
1958	15,724	3,462	129.8
1959	11,631	2,420	95.4
1960	13,617	2,827	102.9

The old Howrah District Gazetteer (1909) recorded: "Infantile mortality is high, though not as high as in other districts. No less than 20 per cent. of the children born in the district die within twelve months of their birth, and according to the statistics for 1901-06, 11 per cent. more die within the next four years. More male infants die than females, and the feverish months of September to December are especially fatal. The Indian mother is usually a good nurse; but poverty and early marriage produce a weak mother and sickly child, while the child's chances are minimized by want of sufficient nourishing food and clothing, and by the mother's ignorance of infantile diseases."[2]

Compilation of vital statistics

"The present system of reporting and compiling vital statistics", wrote O'Malley and Chakravarti in the old Howrah District Gazetteer of 1909, "was introduced in 1892, and it would be of little use to compare the results with the unreliable figures reported for previous years, e.g., the number of deaths reported in 1871 and 1872 represented a mortality of only 4.6 and 4.5 per mille respectively—obviously impossible figures. Under the present system, compulsory registration is in force in the towns, i.e., parents, guardians or the

[1] Source: Bureau of Health Intelligence, Directorate of Health, Government of West Bengal.

[2] O'Malley & Chakravarti—op. cit. p. 54.

persons directly concerned are required to report births and deaths to the town police. In rural circles each village watchman is provided with a pocket book, in which he is required to have all births and deaths that may occur within his jurisdiction recorded by the village *panchayat*; these are reported on parade days at the police stations and outposts, which are the registering centres. The statistics thus obtained are compiled and classified by the police, and submitted monthly to the Civil Surgeon, who prepares the figures for the whole district for inclusion in the annual report of the Sanitary Commissioner. The Statistics are checked from time to time by superior police officers and by Inspectors and Sub-Inspectors of Vaccination.

"In the towns, the higher level of intelligence and the fear of legal penalties tend to make registration and the classification of diseases more accurate than in the rural tracts. In the latter the reporting *chaukidar* is generally illiterate, and vital registration is less correct, the chief defects being that still-births are very often omitted, while births of females and births in outlying parts, and among the lowest castes, are overlooked. Deaths are more carefully recorded, but the causes of death, except cholera and smallpox are hopelessly confused, the bulk being classified under the general head of fever. Still the figures can be accepted so far as concerns the relative healthiness or unhealthiness of different years and the approximate growth of the population."[1]

With a view to strengthening the compilation machinery, a scheme was taken up in January 1959 for setting up Model Health and Ideal Registration Units in selected Unions of the district where Health Centres were functioning and recording of vital statistics by the teaching medical institutions and arranging half-yearly censuses of births and deaths in selected urban and rural areas. The main defect of the scheme was that it covered only a fraction of the total area rendering the collected data no more reliable than those obtained in sample surveys. The Annual Administrative Report on the State of Health in West Bengal for 1963 published by the State Directorate of Health classifies 7 types of registration units, namely (*i*) Registrars of births and deaths in municipal areas, (*ii*) Sanitary Inspectors, (*iii*) Medical Officers of rural health centres, (*iv*) Officers in charge of police stations, (*v*) Railway Station Masters, (*vi*) staff of the Basic Public Health Units and (*vii*) others. Of these, the 4th, 5th and 7th categories did not have sufficient experience of the work during 1961, 1962 and 1963. The official report, therefore, had to conclude that even in 1963 the system of registration of vital statistics did not attain optimum efficiency. In fact, the area covered by these agencies leave out extensive tracts where compilation of vital statistics is still the responsibility of the *Gram Adhyakshas* and their *chowkidars*. Since 1963 pilot projects

[1] O'Malley & Chakravarti—op. cit. p. 53.

have been initiated jointly by the Directorates of Health and of Panchayats under which *Gram Adhyakshas* have been supplied with *hātchiṭās* (note books) for recording of all births and deaths within their respective jurisdictions independent of any official registration system. This project is still in an experimental stage. All this will tend to show that health statistics, particularly those relating to rural areas, are still to be taken with a grain of salt.

DISEASES COMMON TO THE DISTRICT

The following table,[1] compiled from annual administrative reports of the State Health Directorate gives the number of outdoor and indoor patients treated in various hospitals of the district recognized by the Government and their respective mortality rates. Admittedly, the number of patients surveyed is smaller than that in the whole district, many of whom might have undergone treatment at other medical centres. But the present figures, based on a fairly large population, may be taken as representative.

PATIENTS TREATED IN RECOGNIZED HOSPITALS IN HOWRAH DISTRICT AND DEATHS FROM SPECIFIC CAUSES: 1961-63

Name of Disease	1961	1962	1963
Anaemia			
Outdoor	8,838	11,662	12,337
Indoor	141	362	366
Death	66	64	71
Cholera			
Outdoor	32	66	48
Indoor	460	719	863
Death	196	48	82
Diabetes			
Outdoor	112	163	127
Indoor	19	29	27
Death	6	3	5
Diseases during Child-birth			
Outdoor	3,950	4,316	3,044
Indoor	349	1,489	1,876
Death	35	28	45
Dysentery			
Outdoor	17,481	59,109	62,151
Indoor	136	441	488
Death	38	28	31
Early Infancy Diseases			
Outdoor	259	169	334
Indoor	22	122	77
Death	14	73	65

(contd.)

[1] Directorate of Health Services, Government of West Bengal—Annual Reports on the state of Health of West Bengal (Part—II), 1961, 1962 & 1963.

PATIENTS TREATED IN RECOGNIZED HOSPITALS IN HOWRAH DISTRICT AND DEATHS FROM SPECIFIC CAUSES: 1961-63—*contd.*

Name of Disease	1961	1962	1963
Filariasis			
Outdoor	476	143	24
Indoor	9	29	34
Death	—	—	—
Gastritis			
Outdoor	10,751	17,157	11,850
Indoor	31	111	92
Death	1	—	1
Influenza			
Outdoor	31,609	37,422	40,678
Indoor	129	349	558
Death	—	—	3
Kala-azar			
Outdoor	73	101	2
Indoor	2	5	3
Death	1	1	—
Leprosy			
Outdoor	1,260	781	699
Indoor	1	3	3
Death	1	—	—
Malaria			
Outdoor	2,532	1,372	996
Indoor	5	11	9
Death	—	—	—
Mental Diseases			
Outdoor	596	396	392
Indoor	12	48	39
Death	—	—	—
Metabolic & Nutritional Diseases			
Outdoor	11,894	15,843	15,839
Indoor	51	142	184
Death	42	55	80
Neoplasm Group of Diseases			
Outdoor	991	3,569	1,428
Indoor	23	51	67
Death	18	13	17
Pneumonia			
Outdoor	1,539	2,462	1,433
Indoor	68	175	202
Death	39	44	59
Poison—effects of			
Outdoor	315	668	206
Indoor	110	489	536
Death	20	26	48
Senility etc.			
Outdoor	2,957	26	—
Indoor	1	3	2
Death	1	—	—

(contd.)

PATIENTS TREATED IN RECOGNIZED HOSPITALS IN HOWRAH DISTRICT AND DEATHS FROM SPECIFIC CAUSES: 1961-63—*contd.*

Name of Disease	1961	1962	1963
Smallpox			
Outdoor	43	17	79
Indoor	—	14	32
Death	—	3	15
Syphilis			
Outdoor	245	182	350
Indoor	2	7	7
Death	2	—	1
T.B. of Meninges			
Outdoor	6	10	1
Indoor	8	18	19
Death	8	13	10
T.B.—Pulmonary			
Outdoor	1,379	1,343	1,579
Indoor	59	151	221
Death	26	33	45
T.B.—Respiratory			
Outdoor	132	202	97
Indoor	7	24	31
Death	2	3	5
T.B.—Other forms			
Outdoor	253	107	233
Indoor	22	86	74
Death	11	14	16
Typhoid			
Outdoor	1,132	1,309	1,584
Indoor	44	203	242
Death	7	12	8

Malaria

That malaria was once a scourge of the district can be recalled from the following report (1906) of Mr. Drury, the then Civil Surgeon of Howrah, as quoted by O'Malley and Chakravarti.[1] "In my opinion the fevers of the Howrah district are mainly malarial. In 1864 a Board appointed to inquire into an epidemic of fever in the districts of Burdwan and Hooghly (which then included Howrah—Ed.) expressed the opinion that the prevailing fever was immediately caused by malaria. The Sanitary Commissioner of Bengal in 1870 expressed a similar opinion. ...I find that during the past 14 years all the Civil Surgeons are of opinion that the fevers of the district are malarial, while not one of them suggests any other cause. This prevalence of malaria is generally said to be caused by the defective drainage and water-logged condition of the district; and it is almost invariably noted that the fever mortality is highest in the three or four months

[1] O'Malley & Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. pp. 55-56.

succeeding the cessation of the rains. I have only one record of an investigation into the prevalence of malaria in a part of the district, viz., a report on its prevalence in the village of Raspur near Amta by Captain Ross, I.M.S., Deputy Sanitary Commissioner. In the autumn of 1905 there was a heavy mortality of fever along the banks of the Damodar in the neighbourhood of Amta. This outbreak was attributed by the villagers to flooding of the adjacent lands. Captain Ross visited Raspur and considered the question in the light of modern views as to the causation of malaria. He rejected the opinion that inundation of the land was the cause of the malarial fever and attributed it to the presence in the village of a great number of small *dobas* surrounded by bamboo clumps and dense undergrowth. These *dobas* form an ideal breeding ground for the anopheles mosquito, which carries the germs of malaria from the sick to the healthy. The same kind of conditions are found in many of the villages of the district, and on the introduction of a case of malarial fever into a village the disease is likely to spread."

That the present incidence of malaria is negligible in the district will be evident from the following mortality table.

QUINQUENNIAL TABLE OF DEATHS FROM MALARIA IN HOWRAH DISTRICT: 1950-65

Year	Total deaths	Rate of death (per 1,000 of population)
1950	1,565	1.1
1955	289	0.2
1960	91	0.05
1965	5	—

The following table will show that the disease is more prevalent in the rural than in the urban areas of the district.

DEATHS FROM MALARIA IN RURAL AND URBAN AREAS OF HOWRAH DISTRICT: 1961-65

	1961	1962	1963	1964	1965
Rural	37	19	17	3	5
Urban	19	20	5	5	—

The annual report for the year 1948 on the state of health in West Bengal published by the Health Directorate, Government of West Bengal, recorded that compared with the five years from 1938 to 1942 the districts of Howrah and Calcutta recorded higher death-rates from malaria, while in the remaining 12 districts of the State the rate was lower. The report for 1949 stated that death-rates from malaria were high in three districts, namely Birbhum, Howrah and Calcutta and low in the remaining districts. Because of the higher incidence

of malaria in Howrah, a malaria control unit (one of the sixteen opened all over the State) under the National Malaria Control Programme started functioning in the district in 1953 with a Medical Officer, a Malaria Supervisor and a Malaria Inspector and having jurisdiction over 546.7 sq. miles inhabited by 11.14 lakhs of people spread over 11 police stations. The overall area was divided into a number of zones, each under a Malaria Supervisor assisted by a few Malaria Inspectors each of whom was, again, in charge of 2-3 spray gangs consisting of one Mate and 6 field workers. The zones were provided with motor transport for distribution of men and materials to the places of actual operations. After the unit had worked for some time, the spleen-index came down from 22.6 in 1954 to 18.6 in 1965 and the death-rate from 594 in 1953 to 373 in 1954. The Consolidated Blood Survey Report for calculating parasite-rate showed that it also decreased from 3.9 in 1952 to 3.4 in 1954 and to 0.6 in 1955. The National Malaria Control Programme was renamed the Malaria Eradication Programme in 1958-59 and from 1963-64 it entered into what was called the 'consolidation phase'. The overall results were so encouraging that in 1963 the State Health Directorate omitted for the first time malaria from a list of 6 leading causes of death in the district. In fact, the disease is no longer of any consequence in Howrah, and the anti-malaria programme started working under a 'maintenance phase' since 1965 on the recommendation of an independent appraisal team of the Government of India.

Plague

Plague, though never quite virulent in the district, "was detected first in 1900, . . . the number of deaths being generally below 200 per annum. The only exception was in 1905, when 1,277 persons died, the vast majority (1,151) being in Howrah city."[1] The disease reappeared in the district in 1949 when seven persons died of it. Most of the cases were of bubonic type, only a few being of the septicaemic and pneumonic category. In the same year, 19,483 persons were given anti-plague inoculation and disinfestation operation was carried out in 148 buildings and 64 huts in the district. In 1951, 41,899 persons were inoculated as an anti-plague measure and disinfestation carried out in 139 huts and 612 buildings. Many rats were also destroyed and collected for laboratory examination. In 1953 Ward No. 1 of Howrah Municipality was declared as the worst affected area and 29,693 persons were inoculated and disinfestation operation was carried out in 2,450 premises in Howrah and 33 premises in Baly. The anti-plague operations continued in subsequent years and no death was reported from this disease from 1953 onwards.

Cholera

The urban areas of the district characterized by poor environmental sanitation and the rural areas suffering from lack of medical facilities and paucity of pure drinking water are traditionally prone to cholera.

[1] O'Malley & Chakravarti—op. cit. p. 58.

About the death-rate from this disease it was stated that "in 1900 there was a rise to 4.53 per mille; and the rise was more or less kept up during the next seven years. The rise is probably connected with the large influx of coolies from Bihar and other places up-country. These coolies live huddled together in insanitary *bastis*, often do not drink pipe water, and eat the coarsest kinds of grain."[1] The disease is still generally endemic throughout the year reaching its peak in April and July. Its rural character is evident from the following table.

DEATHS FROM CHOLERA IN HOWRAH DISTRICT: 1961-65

	1961	1962	1963	1964	1965
Urban	311	246	120	61	20
Rural	231	281	562	115	25

In 1948 the highest death-rate from the disease in the whole of West Bengal was recorded from this district (2,072 persons constituting 1.4 per mille). Anti-cholera regulations under the Indian Epidemic Diseases Act, 1897 had to be promulgated in the district that year. The following table would give an idea about the rapidly decreasing incidence of the disease in Howrah over a 15-year period from 1950 to 1965

QUINQUENNIAL TABLE OF DEATHS FROM CHOLERA IN HOWRAH DISTRICT : 1950-65

Year	Total deaths	Death-rate (per 1,000 of population)
1950	1,625	1.1
1955	805	0.49
1960	261	0.1
1965	45	0.02

Prior to 1958 anti-cholera drives were left to the local bodies, the Government supplying inoculation vaccines free of cost and running a few mobile medical units of their own. It also gave financial assistance to municipalities for improving their drinking water supply and sewerage schemes and to the Civil Surgeons and the Executive Engineers of the Public Health Engineering Directorate for sinking and re-sinking tube-wells in the rural areas as anti-cholera measures.

Smallpox

Smallpox, a virus-borne disease, prevails all over the district visiting it sometimes in an epidemic form. The following table gives the number of deaths caused by the disease in the district in recent years.

DEATHS FROM SMALLPOX IN HOWRAH DISTRICT: 1961-64

	1961	1962	1963	1964
Urban	18	148	260	16
Rural	8	54	1,187	95

[1] ibid. p. 56.

It appears that in 1963, the disease visited both the rural and urban areas of the district in an epidemic form. O'Malley and Chakravarti, however, wrote—"Small-pox appears every year, but is rarely epidemic or widespread. It was only in 1906 that the death-rate rose over one per mille, the incidence being highest in March and April. The town of Howrah suffered rather severely, having a death-rate of 3.43 per mille; but the villages in the interior were comparatively immune."[1] But recent experience shows that the rural areas are far more prone to the disease than what they were during the days of O'Malley and Chakravarti (1909). The disease broke out in 1950 in an epidemic form in the State including the Howrah district where 1,781 persons died accounting for a death-rate of 1.2 per thousand. In that year "... mortality from smallpox was higher in the urban areas than in the rural areas and 69 per cent of the total deaths due to this cause was recorded in the urban areas. The city of Calcutta and Howrah only were responsible for more than half of the deaths (68%) due to smallpox."[2] In 1951, a smallpox epidemic visited the district in which 3,299 persons died accounting for a death-rate of 2.0 per thousand of population. In addition to vaccinations given as an anti-smallpox measure, temporary smallpox regulations under the Indian Epidemic Diseases Act, 1897 had to be promulgated within the Howrah Municipality for six months. In 1955, the district along with Midnapur recorded the highest death-rate from the disease in West Bengal which was 0.05 per mille. Temporary regulations under the Indian Epidemic Diseases Act, 1897 were promulgated in the district that year as well. Anti-epidemic measures were also taken by the epidemic staff attached to six relief camps in the district housing a total population of 10,193. Subsequent experience shows that the disease has now been controlled to a great extent.

Enteric diseases: diarrhoea, dysentery etc.

Enteric diseases were widespread in the district in the early part of this century when for inadequate supply of pure drinking water, particularly in the rural areas, the visitations of diarrhoea and dysentery were frequent. Although the water supply position has since greatly improved, bad living conditions are still responsible for the outbreak of these diseases which reach their peak during the rains and continue till January. Their incidence in recent years is given in the following table[3] which will establish their rural character.

DEATHS FROM DYSENTERY IN ALL FORMS IN HOWRAH DISTRICT: 1961-64

	1961	1962	1963	1964
Urban	328	322	98	66
Rural	362	377	359	286

[1] loc. cit.

[2] Directorate of Health Services, Government of West Bengal—Annual Report on the Health of the Population of West Bengal, 1950. Calcutta, 1953 p. 2.

[3] Directorate of Health Services, Government of West Bengal—Annual Reports on the state of Health of West Bengal (Part—I), 1961, 1962, 1963 and 1964.

In 1948, the highest mortality rate (2.4 per mille) in the State from dysentery and diarrhoea was reported from this district where 3,495 persons died of these diseases. In recent years (1961 to 1964) enteric diseases have been considered to be one of the six leading causes of death in the State as a whole but they appear to be urban in character elsewhere whereas in Howrah district they have a rural bias.

Tuberculoses

Tuberculoses of several kinds have now assumed serious proportions. Factors like industrialization, malnutrition, lack of hygienic accommodation and influx of displaced persons from East Pakistan causing congestion are mainly responsible for the spread of the disease, the urban and rural distribution of which in the district is shown in the following table.

DEATHS FROM TUBERCULOSES IN HOWRAH DISTRICT: 1961-64

		1961	1962	1963	1964
Pulmonary T.B. without mention of occupational diseases of lung	Urban	162	153	47	48
	Rural	73	96	91	73
T.B. of respiratory system other than pulmonary without mention of occupational diseases of lung	Urban	112	101	27	33
	Rural	135	132	128	82
T.B. of meninges and central nervous systems	Urban	11	1	1	5
	Rural	—	—	1	—
T.B. of bones and joints, active or unspecified	Urban	—	—	—	—
	Rural	1	2	—	—
T.B. of other forms	Urban	4	1	—	—
	Rural	—	2	1	—

Apart from the Government-aided chest clinic affiliated to the Bengal Tuberculosis Association and attached to the Howrah General Hospital, the said hospital had six beds in 1952 for the treatment of indoor T.B. patients.[1] There are a few T.B. specialists working in the Howrah General Hospital and Uluberia Subdivisional Hospital.

Eye diseases

Incidence of eye diseases in the district has of late been very high. Though there were no deaths from these diseases, rapid industrialization, poor hygienic conditions, malnutrition, ignorance of proper personal hygiene etc. contributed to their growth. The following table[2] gives the number of eye patients treated in the hospitals of the district in recent years.

[1] Directorate of Health Services, Govt. of West Bengal—Annual Report on the Health of the Population of West Bengal, 1952. Calcutta, 1956. pp. 46-47.
[2] Directorate of Health Services, Government of West Bengal—Annual Reports on the state of Health of West Bengal (Part II), 1961, 1962 & 1963.

NUMBER OF PATIENTS TREATED FOR EYE DISEASES IN HOSPITALS OF HOWRAH DISTRICT: 1961-63

		1961	1962	1963
Inflammatory diseases of eye	Outdoor	17,448	16,737	4,301
	Indoor	6	34	29
	Death	—	—	—
Cataract	Outdoor	1,340	1,062	1,157
	Indoor	40	244	250
	Death	—	—	—
Glaucoma	Outdoor	241	266	89
	Indoor	2	9	15
	Death	—	—	—
Other eye diseases	Outdoor	12,276	12,281	10,256
	Indoor	17	44	61
	Death	—	—	—

PUBLIC HOSPITALS AND DISPENSARIES

The following table[1] gives the names of various public hospitals in the district, the number of patients treated and the annual death-rates in them during recent years. The figures will indicate the extent of hospital facilities available in the district and the performance of individual hospitals in serving the ailing public.

PERFORMANCE OF PUBLIC HOSPITALS IN HOWRAH DISTRICT: 1963-65

Name of institution	1963		1964		1965	
	No. of patients treated	Annual deaths	No. of patients treated	Annual deaths	No. of patients treated	Annual deaths
Amta A.G.* Hospital	788	13	510	15	Closed	—
Andul A.G.* Hospital	99	5	35	2	3	—
Belur A.G.* Hospital	542	5	580	8	601	10
Howrah General Hospital	17,127	961	17,098	962	16,107	875
Tulsiram Lakshmidevi Jaiswal Hospital	2,129	5	1,904	1	1,902	—
Uluberia Subdivisional Hospital	1,827	21	2,822	32	3,302	48
Total	22,512	1,010	22,949	1,020	21,915	933

*A G. denotes 'Auxiliary General'.

Since Independence there has been more or less a steady increase in the number of hospital beds in the district as would appear from the following table.[2]

TOTAL NO. OF HOSPITAL BEDS IN HOWRAH DISTRICT

Year	No. of beds
1951-52	716
1956-57	633
1961-62	731
1966-67	984

[1-2] Source: Chief Medical Officer of Health, Howrah.

Of the 984 beds available in 1966-67, 907 were free and 77 were paying. Besides, there were 14 cabins. The beds were meant for medical, surgical, tubercular, maternity, gynaecological, cholera and smallpox cases, and for each important disease a number of beds was also kept earmarked. According to the Annual Report on the State of Health of West Bengal (Part II) for the year 1963, 236, 30 and 75 hospital beds in the district were kept reserved for maternity, T.B. and infectious diseases cases respectively. The said report also stated that there were 32 dispensaries and 23 clinics in the district.

The following table gives the distribution of staff in the hospitals and dispensaries of the district in 1963.

DISTRIBUTION OF STAFF IN THE HOSPITALS AND DISPENSARIES OF HOWRAH DISTRICT: 1963

Medical Graduates	Medical Officers	Nurses		Compounders	No. of beds/per		
		Trained	Un-trained		Doctor	Nurse	Compounder
110	65	127	84	96	6.9	5.7	12.5

Apart from the staff mentioned in the above table, there were 55 Health Assistants, 10 Lady Health Visitors and Public Health Nurses and 21 technical hands in the hospitals and dispensaries of the district in 1963.

The Bhore Committee had initially recommended the setting up of primary health centres with 75 beds each for every 20,000 people, but lack of funds and trained personnel resulted in its suggesting the establishment of primary health centres with only 2 beds for maternity and 2 for emergency cases for every 40,000 people. In partial modification of this recommendation, the Government of West Bengal started setting up rural hospitals known as Health Centres since 1948, each of which was to have 4 to 10 indoor beds for serving an area covered by a Union Board (approximately the same area now covered by an Anchal Panchayat). Union Health Centres within each police station were to be affiliated to the Thana Health Centres having a minimum of 20 and a maximum of 50 beds. All Health Centres in a subdivision were, again, to be affiliated to the Subdivisional Hospital having 68 indoor beds each. The conditions for the establishment of a Union Health Centre were that the local people should donate 6 *bighās* of land and an adequate amount of cash while for a Thana Health Centre 20 *bighās* of land plus a cash amount. The scheme continued till 1955 when, at the instance of the Government of India, it was decided to have Primary Health Centres with 10 beds at the headquarters of every Community Development Block along with 2 or 3 Subsidiary Health Centres at suitable places within each Block area. Subsidiary Health Centres were to have only 2 non-dieted emergency beds. A list of the existing public health centres of the district appears in the Appendix.

In 1963, 21 Health Centres (with a total of 208 beds) which submitted returns to the Health Directorate, West Bengal, had treated 3,56,667 new cases of outdoor patients and 6,730 new cases of indoor patients with a turnover of 32.4 per bed. In the same year 127 of the indoor patients died giving a case fatality ratio of 1.9%.

Howrah General Hospital

Tracing the early history of the Howrah General Hospital, C. N. Banerjei wrote:[1] "In 1828 we find a large upper roomed house at the Howrah ghat, not a stone's throw from the water's edge occupying a site now swallowed up by the Railway Co.'s premises. To this house the sick seamen of the port used to resort for medical treatment and advice. This house rented at Rs. 100 a month and placed under the supervision of Mr. Linton, a ship Doctor, assisted by a junior apothecary, was known as the 'Seamen's Hospital', and received the support of the public, and of the Calcutta merchants. On Linton's failure, Dr. Duncan Stewart in 1842, in conjunction with Rev. Professor Street of Bishop's College, and Messrs Tayler, Bowring, and James Mackenzie resuscitated the hospital, which was located in the same building. About 1851 Howrah having been fixed upon as one of the *termini* of the East Indian Railway, notice was given to the Committee of management to remove the hospital. The Committee accordingly in 1852 issued a circular, appealing for contributions, to construct a building, the upper flat of which was intended for the residence of the Medical Officers attached to the institution. Pending the result of this appeal, the hospital was removed to Chandmaree, and located in a house rented from one Mr. Hudson. Subscriptions were slow in coming in, and hence there was a delay in constructing the proposed building. Meanwhile the line of rail had opened, and the sick employees, of the Railway Co. were also treated there. This arrangement continued up to 1856, when a fresh appeal was made to the public, and it was at the same time proposed to found a General Hospital. The appeal was not made in vain. Government granted a site near the Cutcherry. Rs. 14,000 were subscribed, and further assistance promised. The year 1858 witnessed the beginning of the construction of the building on the Maidan, now known as the 'Howrah General Hospital' of Etruscan and Gothic structure. It was opened on the 7th May 1861 when the Chandmaree house was given up. It has treated from 1862 to 30th June last (1871 or 1872—Ed.) 1,28,753 patients, and is on the receipt of Rs. 1,551 a month, consisting of grants from Government, the Railway Co., the Municipality, and public subscriptions. It has received lately donations from some of the Native nobility, but as the number of patients treated is very large, its expenditure is considerably more than its income."

In 1890 the management of the Howrah General Hospital was

[1] C. N. Banerjei—An Account of Howrah: Past and Present. Calcutta, 1872. pp. 66-68.

vested in a managing committee appointed by the Provincial Government under the provisions of the Charitable Endowments Act that year. It was stated in the old Howrah District Gazetteer[1] of 1909 that: "The premier medical institution is the Howrah General Hospital, which was opened in 1861. At present it consists of a large block of wards for European cases, a block for Indian male cases, a dispensary and a small block for Indian females. It is undergoing a large scheme of reconstruction, which will greatly increase its accommodation and usefulness; and it will soon consist of an European general block. European infectious block, Indian male surgical block, Indian male medical block, a large block for Indian female cases, and nurses' quarters. There are now 95 beds for male and 24 beds for female patients, and in 1907 altogether 2,116 indoor patients and 13,979 outdoor patients were treated, representing a daily average of 65 and 105 respectively. In that year a bequest of Rs. 25,000 made by the late Bābu Devi Prasad was utilized for the improvement of the Indian ward." In 1937-38 the hospital had 180 beds and 2 Assistant Surgeons and a Sub-Assistant Surgeon for the X-Ray department on its pay roll.

On January 16, 1945, the Provincial Government took over the institution with the Civil Surgeon of the district as its *ex-officio* Surgeon Superintendent. Its bed strength rose to 310 on 1.6.1962. Presently, the Superintendent of the hospital is designated as the District Medical Officer under the control of the Chief Medical Officer of Health of Howrah.

Tulsiram Lakshmi Devi Jaiswal Hospital

The Tulsiram Lakshmi Devi Jaiswal Hospital, which started working from 12.11.1949 at Lilua, was taken over by the State Government on 1.10.1964. It has 50 beds and works only as an obstetrical and gynaecological hospital. There are at present 5 Medical Officers working under the District Medical Officer, Howrah, who is its *ex-officio* Superintendent. The nurses number 12 and the members of inferior staff 31. A new building within the hospital premises is now under construction which will accommodate 256 new beds. The following table[2] gives the number of patients treated in the hospital in recent years as also the corresponding mortality figures.

	Patients		Deaths	
Year	Treated	Discharged	Obstetrical	Gynaecological
1962-63	2,868	2,858	10	—
1963-64	2,129	2,124	5	—
1964-65	1,904	1,903	1	—
1965-66	1,902	1,902	—	—
1966-67	2,316	2,316	—	—

[1] O'Malley & Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 64.

[2] Source: Superintendent, Tulsiram Lakshmi Devi Jaiswal Hospital, Howrah.

Medical administration

The Chief Medical Officer of Health is now in overall charge of medical and public health administration of the district. Formerly, the functions of the Civil Surgeon were limited only to the curative side of public health and its preventive aspects were entrusted, under Bengal Act III of 1885, to the District and Local Boards. A District Health Officer, whose establishment costs were shared by the District Board and the Provincial Government, used to be appointed then under each District Board for this purpose. In 1946 the Provincial Government appointed the Bhore Commission to go into the structure of public health organization and on its recommendation both the curative and preventive sides of public health were brought under the control of the Chief Medical Officer of Health in 1958 replacing the former Civil Surgeon The C.M.O.H. is now assisted by two officers for the two branches—the District Medical Officer looking after the curative and the District Health Officer the preventive aspects of public health. On the medical side the C.M.O.H. is assisted by an Assistant C.M.O.H., the Superintendent of the District Hospital designated as the District Medical Officer, the Subdivisional Medical Officer of Uluberia, and Medical Officers In-charge of Auxiliary Government Hospitals and Health Centres. On the public health side the C.M.O.H. is assisted by a District Health Officer, a Subdivisional Health Officer and a Sanitary Inspector each having charge over the 11 health circles. The District Health Officer looks after the public health and sanitation of the district. He is also the authority for issuing licences to hotels and restaurants in non-municipal areas. Smallpox vaccinations and cholera inoculations are also supervised by him. In order to help public health efforts so far as vaccinations and cholera inoculations are concerned, there is another unit styled C.M.I.O.* which supplements the work done in municipal and some non-municipal areas. After the Malaria Organization came into its 'maintenance phase' since 1965, the Medical Officer of the Malaria Organization has been re-designated as Assistant District Health Officer and he also exercises the functions of the Sadar Subdivision Health Officer. The Family Planning Organization of the district is under the control of the District Family Planning Officer who in his turn is under the C.M.O.H. Under the District Family Planning Organization there are 3 urban family planning clinics in the district headquarters and one in Uluberia subdivision. All the 14 C.D. Block areas in the district are now covered by the family planning programme supervised by the Medical Officers of the Primary Health Centres or the Subsidiary Health Centres, as the case may be. The Primary Health Centres and the Subsidiary Health Centres also serve as medical care and public health organizations. There is another set-up under the C.M.O.H. called the School Health

* Calcutta Metropolitan Immunization Organization.

Unit immediately manned by a Medical Officer co-ordinating the activities of the Medical Officers of Health Centres who are entrusted with the task of examining the health of school children.

All the aforesaid health measures are reflected in the hospital statistics of the district which show that in an average year (1963) the percentage of new cases in outdoor departments is 41.8%. That year each hospital bed served 31.5 patients, 5.8% of whom were surgically operated upon, 2.2% X-rayed, 3.2% underwent clinical examination and 17.5% were given blood transfusion while the mortality rate was as low as 5.1%.

By their very nature, the services of the four railway hospitals, the police hospital, the jail hospital, the B.E. College hospital and the Botanic Garden dispensary are restricted to the staff of the respective departments.

PRIVATE HOSPITALS AND NURSING HOMES

Lists[1] of private hospitals, dispensaries and nursing homes of the district appear in the Appendix.

A charitable Ayurvedic dispensary under a *Kavirāj* is being run by the Howrah Municipality at 43 Jelia Para Lane, Salkia since August 1958. In 1966 it treated 840 patients. Another similar unit named Radhakrishna Ayurvedic Charitable Dispensary functions at Salkia.

In 1963 the Howrah Municipality opened three charitable homoeopathic dispensaries to which seven more have lately been added covering 10 wards of the municipality. The Medical Officers in charge of these dispensaries enjoy the same status as that of allopathic Medical Officers.[2]

Satya Bala Infectious Diseases Hospital

The Satya Bala Infectious Diseases Hospital had its forerunner in the Infectious Diseases Hospital which formerly functioned at Salkia as a segregation hospital. This hospital was started[3] during the plague epidemic in 1896 and was known for years as the Plague Hospital. It continued to stay after the subsidence of the plague epidemic for the treatment of infectious diseases. For a long time the hospital was only a collection of dilapidated *golepatta* huts with cutcha floor and no money could be spent on its improvements as the property belonged to an owner who was not willing to allow the hospital to remain at the site. In 1929-30 the huts were improved and the staff was reorganized. In fact the condition of the hospital had deteriorated and it came to be the refuge of low class people only picked up from the street. For years past the Howrah Municipality had been trying unsuccessfully to shift the hospital to a more suitable site, but local opposition wrecked all such schemes. At one time the

[1] Source: Chief Medical Officer of Health, Howrah.
[2] The Amrita Bazar Patrika, Calcutta, dated 5.1.67.
[3] Bejoy Krishna Bhattacharya—Principles and Methods of Municipal Administration in Bengal (Part I). Howrah. Calcutta, 1936. p. 135.

lands were purchased at Brindaban Mullick Lane, Bantra for the purpose, but public opposition supported by official expert opinion won and the lands had to be sold. A donation of Rs. 10,000 for building the hospital had ultimately to be refunded. At last the Howrah Municipality donated in 1944 a plot of its own land measuring 5 *bighās* on the G.T. Road (North), Howrah, where the hospital stands now. Another piece of 8 *kāṭhās* of land was later obtained through purchase to give the whole plot a rectangular shape. In 1945 a donation of Rs. 80,000 for construction of buildings and Rs. 20,000 for purchase of appliances etc. was received from Sm. Satya Bala Devi of 5 Manmatha Bhattacharjee Lane, Calcutta-4 and the hospital was named after her. The Government of West Bengal donated a sum of Rs. 72,000 in 1950 towards its construction and the hospital was inaugurated on June 21, 1951. The Eastern Railway makes a monthly contribution of Rs. 10 to the hospital and the Government of West Bengal has been paying a sum of Rs. 6 per patient per diem since August 14, 1956 under the Employees' State Insurance Scheme. The Baly Municipality's assistance amounts to Rs. 1,000 per year for treatment of patients hailing from that municipal area. The former staff of the Salkia Infectious Diseases Hospital have been absorbed in the hospital as on loan service from the Howrah Municipality. Cholera and Smallpox are the main diseases treated here. There are 40 beds for cholera patients of which 20 are reserved for males, 17 for females and 3 for children. In the Smallpox ward there are 12 beds of which 8 are reserved for males and 4 for females. Extra patients are admitted in both these wards during epidemics. The following table gives statistics of patients treated in the hospital between 1962 and 1966, along with mortality figures.

	No. of Patients		
Year	Treated	Discharged	Died
1962	2,242	2,059	183
1963	2,616	2,408	208
1964	1,489	1,361	128
1965	1,202	1,104	98
1966	1,007	949	59

Howrah Tuberculosis Hospital

Affiliated to the Bengal Tuberculosis Association, the Howrah Tuberculosis Hospital,[1] a private organization at Andul Road (near Sibpur Botanical Garden) was opened to the public in 1957 although a provisional Executive Committee to run it had been formed as early as in 1952 in a public meeting under the chairmanship of late Kartick Chandra Dutta, Ex-Chairman, Howrah Municipality. The

[1] Source: Superintendent, Howrah Tuberculosis Hospital.

Memorandum of Association was registred in 1953 and in the same year 3 *bighās* 12 *kāṭhās* 5 *chhaṭāks* and 20 sq. ft. of land was gifted by the Howrah Municipality for the construction of buildings. Between 1954 and 1955 a 20-bed hall for indoor patients and an X-Ray chamber and outdoor clinic were constructed besides the purchase of an adjacent plot of land measuring 2 *bighās* 5 *kāṭhās* 10 *chhaṭāks* and 30 sq. ft. electrical and sanitary installations were completed between 1955 and 1956. At present the hospital stands on about 6½ *bighās* of land with provision for running an indoor ward in addition to the existing outdoor clinic with attached X-Ray and pathology departments as also medical and chest units under the Employees' State Insurance Scheme. It serves inhabitants of urban as well as neighbouring rural areas. The outdoor chest clinic functions daily on weekdays and the beneficiaries receive free diagnosis and treatment. Anti-T.B. drugs received from Government are distributed to the indigent. Five years ago the hospital used to distribute milk free to the poor but this has been stopped for lack of supply. The Bengal Tuberculosis Association helps it occasionally with gifts of X-Ray films. Between 1960 and 1963 it received Rs. 60,000 from the State Government for its extension and maintenance. The hospital had a governing body elected annually by the members but since 1964 its management has been taken over by a court-appointed Receiver. The indoor department has not yet started functioning but in the outdoor clinic the attendance in 1966 was 23.5 and in 1967 (up to June) 27.1 per day. There are 8 doctors in the hospital all of whom are medical graduates and they include chest specialists, radiologists and pathologists.

Sankar Math Homoeopathic Medical College and Hospital

Under the auspices of the Homoeo Medical Club, West Bengal and the trustees of the Sankar Math, the Sankar Math Homoeopathic Medical College and Hospital, the only institution of its kind in the district has recently started functioning on 8 acres of land at Ramrajatola, Howrah.[1] The outdoor department was opened in April 1967 and it attends to about 200 patients daily, morning and evening. A hospital building with modern appliances is expected to be constructed shortly. Since June 1967, it has also started admitting students in both its morning and evening classes for the first year of the 4-year D M.S. course recognized by the Council of Homoeopathic Medicine, West Bengal, though the institution has not yet been recognized by the said Council.

PUBLIC HEALTH WELFARE ORGANIZATIONS

During the first two Plans, population control was based on a clinical approach to the problem with an increasing number of health institutions utilized as service centres which achieved little in bringing down the birth-rates. During the Third Plan the State

[1] Source: Editor, Homoeo Medical Club Journal, Howrah.

Family Planning

Government launched a comprehensive campaign of Family Welfare Planning with a 100 per cent Central subsidy on non-recurring and 75 per cent on recurring outlays. It integrated within its fold both maternity and child health programmes for a better social balance than could be achieved through mere population control. In rural areas contraceptives were supplied free to all, while in urban areas their distribution was tagged to incomes—those with a monthly income up to Rs. 300 receiving them free, between Rs. 300 and Rs. 500 at half price and above Rs. 500 at full price. The final year of the Third Plan saw the campaign stepped up to an emergency basis when the set-up entrusted with its implementation was also re-organized. A District Family Planning Officer was appointed in each district including Howrah. At present there are 4 urban family welfare planning clinics in Howrah district, situated, one each, at the headquarters of the District Family Planning Officer at Sibpur, at Howrah General Hospital, at Hanuman Hospital and at Uluberia Subdivisional Hospital.[1] Another centre of this type will be shortly opened at Khurut Road, Howrah. Rural family planning is normally the responsibility of primary health centres or subsidiary health centres. A special family planning centre, however, functions at the village of Nimabelia (P.S. Jagatballavpur) because of backwardness of the area. There is a mobile surgical unit for performing vasectomy and a Lady Medical Officer for inserting Intra Uterine Contraceptive Devices (I.U.C.D. or 'Loop'), all over the district. Other contraceptive materials are also distributed from the different centres. During 1965-66, 7,317 I.U.C.D. cases, 404 vasectomy operation cases and 175 ligation of tube cases were reported in the district.[2] In 1966-67 (up to September 1966), I.U.C.D. insertions numbered 2,669, vasectomy operations 356 and tubectomy operations 144.[3]

SANITATION

The public health and sanitation set-up of the district may be broadly divided into two sectors, urban and rural. The former is under municipalities in the municipal towns of Howrah and Baly while the latter is under the Chief Medical Officer of Health assisted by the District Health Officer having 11 Sanitary Inspectors under him and the Executive Engineer, Public Health Engineering helped by an Assistant Engineer having 11 mechanics at thana level responsible for rural water-supply schemes. The municipalities generally have a Health Officer aided by Sanitary Inspectors. Conservancy Inspectors, Sanitary Assistants and Conservancy Assistants who look after conservancy, water-supply, drainage, epidemic control, prevention of food adulteration, issuing of licences, compilation of vital statistics, slum clearance, maintenance of burning ghats and

[1-2] Source: Chief Medical Officer of Health, Howrah.

[3] Source: Government of West Bengal, Finance Department—Economic Review, 1966-67, Calcutta, 1967. p. 18.

burial grounds and administration of slaughter houses, markets and *hāṭs*. In the rural set-up the District Health Officer assisted by the Subdivisional Health Officers and Sanitary Inspectors under them look after environmental sanitation, epidemic control, prevention of food adulteration, health education, and initiation of preventive measures like vaccination and inoculation. The services of the public health staff in the rural areas, previously under the District Board, were provincialized with effect from 1.1.1959 bringing them under the control of the C.M.O.H. With the introduction of Panchayati Raj, the Zilla Parishad replaced the District Board and under the West Bengal Zilla Parishads Act, the Public Health Standing Committee of the Parishad now formulates and executes water-supply schemes in the district out of the Zilla Parishad's own funds supplemented by such financial assistance as is received from the State Government. It appears that public health and sanitation activities of the former District Board started in 1917 and in the two municipalities of Howrah and Baly they were launched in the years 1877 and 1921 respectively.[1]

Water supply: Howrah Municipality

The municipal water-works at Howrah started functioning in 1896 and presently serves an area of 10.10 sq. miles inhabited by 4,22,000 persons. In 1955, the overall daily supply was 41,37,095 gallons accounting for about 7 gallons of filtered water per head per day. "Serampore, about 12 miles upstream, was selected for the location of the water-works just to avoid salinity in water at any place lower down the river. It is situated on the western bank of river Hooghly just almost opposite to Palta, where the water-works for Calcutta stands."[2] It "was originally designed . . . to supply 2.5 million gallons daily at the rate of 20 gallons per capita per day for a population of 1,25,000. The water-works were expanded to 5 m.g.d. (million gallons per day—Ed.) capacity in 1913, when the population exceeded 2,00,000. No further expansion of capacity has taken place though the population has tripled during the past half a century. Today the supply of filtered water is obviously inadequate. There are 93 miles of water supply distribution mains within the municipal limits of Howrah. The average municipal water supply from surface water sources is about 7 gallons per capita per day. Actually, it is considerably less, owing to leakage through distribution mains. It has been estimated that about 2,00,000 gallons are lost per day within the distribution system. In addition, there are over 1,000 small-diameter tube-wells. These tube-wells are sunk to an average depth of 200 ft. During summer, the water table goes below the normal suction lift in some areas. Water supply in Howrah is maintained intermittently. Some big houses and large industrial and commercial undertakings have their own independent water supply system as the municipal

[1] Source: Chief Medical Officer of Health, Howrah.
[2] J. Bonnerjee—Howrah Civic Companion, Volume I. Howrah, 1955. p. 129.

supply cannot be depended upon for quality or quantity."[1] As already stated in Chapter XII, the Public Health Engineering Department has also constructed several elevated reservoirs, pump houses etc. in Howrah city.

Baly Municipality

"Baly municipality had completed a water supply scheme under the Second Five-Year Plan. Non-municipal Baly, Santragachhi, Mahiari, Jagachha mouzas have been taken up under the second phase. After completion of the interim water supply scheme, water distribution mains will also be tied to the mains running from the Padmapukur Jala water treatment plant."[2] Under the emergency water-supply scheme, the Public Health Engineering Department has executed a project for supplying filtered water at the rate of 20 g.p.c.d. (gallons per capita daily) or a total of 16,20,000 g.p.d. (gallons per day), the source being ground water The municipal area has been divided into three zones with separate sources and reservoirs for each. (This scheme has been fully discussed in Chapter XII).

Rural water-supply

Tube-wells in rural areas are generally sunk under rural water-supply schemes initiated by the Relief Division of the Public Health Engineering Department, the C.D.P. Engineering Division of the same department and the Tribal Welfare Department. All of them are maintained by the personnel of the former Department. The depths of tube-wells in the different police stations of the district vary between 300 and 700 ft. The scarcity of drinking water is, however, still felt in some places of Uluberia subdivision and in Sankrail P.S. of Sadar subdivision. Prior to 1961, there were 3,301 public tube-wells in the district; between 1961 and 1965, 110 more tube-wells were sunk and 365 re-sunk.[3]

Sewerage

There being no underground sewerage in both Howrah and Baly municipal areas, human excreta are collected and removed by manual labour. Night-soil from individual premises is collected and deposited in enclosed night-soil transfer depots on the main roads for loading it into lorries which carry it to the trenching ground. There has, of late, been no appreciable increase in the number of service latrines in the municipal areas as the sanction for construction of new houses always includes a provision for the installation of septic tank latrines. Waste matter from such privies as also sullage and storm water are discharged into the same omnibus system of surface drains. There being no suitable outfall arrangement, much of the city becomes water-logged and remains so for days together during the rains. The sewerage zone contemplated under the Howrah Area Development Plan (1966-86) as drawn up by the Calcutta Metropolitan Planning Organization envisages the service to cover "13,700 acres and includes

[1] Calcutta Metropolitan Planning Organization—Howrah Area Development Plan, 1966-86. Calcutta, 1967. p. 28.

[2] loc. cit.

[3] Source: Executive Engineer, Directorate of Public Health Engineering, Howrah Division.

the Howrah-Baly municipal areas, the Baly non-municipal urban area and a part of the rural areas bounded on the west by the Howrah Drainage Canal, on the north by the Baly Khal and on the south and east by the Hooghly river. For master plan purposes of Howrah Improvement Trust, the area has been divided into 4 sub-zones."[1] "Sewage from the four zones will be combined and passed through the outfall sewer till it terminates in the main pump well of the Howrah Pumping Station. From there the sewage will be pumped through a force-main which will pass through culverts to be provided by the South Eastern Railway under its tracks. On the west, sewage from Kona township can also be taken in at the proposed sewage treatment plant."[2]

"The Howrah Improvement Trust already owns a large portion of the sewage treatment site, and since the quantity of sewage to be obtained during the first phase of the scheme is small, elaborate treatment is not required. The oxidation pond method of sewage disposal will be introduced in the interim period. However, it is essential that provision of a complete treatment plant in Howrah be coordinated with the construction of waterworks at Garden Reach and Padmapukur Jala, so that effective sewage treatment units are in operation before withdrawal of water for drinking purposes is made from the Hooghly River. As Howrah is densely populated, having no sewage treatment facility, the quantity of sewage arriving at the treatment plant will depend entirely on the rate at which the service connection from premises are made with the sewerage system. Under these conditions, it will be necessary to phase the construction of the sewage treatment plant in conformity with the actual build-up of sewage quantity.

"Based on the ultimate conditions in the Howrah zone, the average capacity of the sewage treatment plant will be about 75 m.g.d. (million gallons per day—Ed.). Construction of the treatment plant will be in four stages. As part of first-stage construction, a primary facility with 10 m.g.d. capacity is recommended. Second-stage construction will require additional secondary treatment units to increase the capacity to 25 m.g.d. in 1975. In the third stage—about 1985—the plant capacity will be raised to 50 m.g.d. and in the fourth stage the ultimate capacity will be achieved."[3]

Drainage

The existing drainage system of Howrah consists mostly of open channels and surface drains emptying into several neighbouring swamps and the Bhagirathi. The Howrah Area Development Plan of the C.M.P.O. proposes, inter alia, "to convert a part of the low-lying Padmapukur Jala (marsh) into a storm water reservoir covering

[1] Calcutta Metropolitan Planning Organization—Howrah Area Development Plan, 1966-86. Calcutta, 1967. p. 28.
[2] loc. cit.
[3] loc. cit.

105 acres and employing a three-foot operating level difference. The reservoir will store storm waters during the high tide periods and release the stored water during periods of low tide." For non-urbanized areas the said Plan proposed that the old Howrah Drainage Canal be improved so that storm water could flow into it more easily.[1]

Refuse collection

Within the Howrah municipal area the average daily collection of refuse amounts to nearly 225 tons which is carried to the dumping yards at Belgachhia and Padmapukur Jala. The Howrah Area Development Plan of the C.M.P.O. suggested that for "efficient collection and removal of refuse and garbage, an additional fleet of 20 modern refuse collection vehicles with closed bodies of 10 to 13 cubic yard capacity is required. ... If sanitary landfill were properly utilized in Howrah the 225 tons of refuse collected daily in the city could be used to reclaim approximately ten acres of low-lying land a year."[2]

Vaccination

That vaccination has done a great deal to eradicate smallpox from the district will appear from the following table.[3]

Year	No. of successful vaccinations	Death-rate from smallpox per mille
1951	1,40,602	2.0
1952	76,856	0.1
1953	86,058	0.02
1954	1,17,753	0.25
1955	1,37,020	0.05
1956	1,39,414	0.1
1957	3,08,640	1.4
1958	2,09,985	0.9
1959	1,95,105	0.02
1960	1,79,350	0.02

The following table gives the number of vaccinations and inoculations administered in the district between 1961 and 1966.[4]

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[1] loc. cit.
[2] loc. cit.
[3] Government of West Bengal, Directorate of Health Services—Annual Report on the state of Health of West Bengal, 1960. Calcutta, 1962. p. 808-09.
[4] Source: Chief Medical Officer of Health, Howrah.

NO. OF VACCINATIONS AND INOCULATIONS ADMINISTERED IN HOWRAH DISTRICT: 1961-66

Year	Vaccinations	Re-vaccinations	T.A.B.C.* inoculations	A.C.† inoculations
1961	43,904	86,247	60,802	1,16,363
1962	54,447	3,24,933	64,125	1,42,987
1963	80,939	4,96,558	69,644	2,72,648
1964	38,895	3,04,172	50,158	2,58,024
1965	50,364	2,86,752	54,714	2,31,769
1966	64,652	1,27,628	92,599	1,06,427

* Typhoid A & B and Cholera.
† Anti-Cholera.

APPENDIX A

LIST OF HEALTH CENTRES IN HOWRAH DISTRICT

Name	Police Station	No. of beds
Jagatballavpur P.H.C.	Jagatballavpur	50
Domjur P.H.C.	Domjur	20
Amta P.H.C.	Amta	10
Jagadispur P.H.C.	Baly	10
Jaypur P.H.C.	Amta	10
Deulpur P.H.C.	Panchla	10
Debipur P.H.C.	Uday Narayanpur	10
Kamalpur P.H.C.	Syampur	10
Jhumjhumi P.H.C.	,,	10
Bagnan P.H.C.	Bagnan	10
Maju S.H.C.	Jagatballavpur	10
Patihal S.H.C.	,,	10
Bargachhia S.H.C.	,,	10
Sankarhati S.H.C.	,,	10
Harispur S.H.C.	Uday Narayanpur	14
Raspur S.H.C.	Amta	10
Jhunkra (Amragori) S.H.C.	,,	10
Nabagram S.H.C.	Syampur	10
Polgusthia S.H.C.	Jagatballavpur	10
Basantapur (Malo) S.H.C.	Amta	10
Khosalpur S.H.C.	,,	10
Basudevpur S.H.C.	Uluberia	2 (non-dieted)
Bonharispur S.H.C.	Panchla	2 ,,
Dihi Bhursut S.H.C.	Uday Narayanpur	2 ,,
Gobindapur S.H.C.	Jagatballavpur	2 ,,
Kolara S.H.C.	Domjur	2 ,,
Jagachha S.H.C.	Jagachha	2 ,,
Adra S.H.C.	Bagnan	2 ,,
Mankur S.H.C.	,,	2 ,,
Gar Bhabanipur S.H.C.	Uday Narayanpur	2 ,,
Garipur S.H.C.	Amta	2 ,,

(contd.)

LIST OF HEALTH CENTRES IN HOWRAH DISTRICT—*contd.*

Tulshiberia S.H.C.	Uluberia	2 (non-dieted)
Dakshin Khalna S.H.C.	Amta	2 ,,
Bankra S.H.C.	Domjur	Without bed
Baly S.H.C.	Baly	,, ,,
Amardaha S.H.C.	Syampur	,, ,,
Batul S.H.C.	Bagnan	,, ,,
Barberia S.H.C.	Uluberia	2 (non-dieted)

P.H C.—Primary Health Centre.
S.H.C.—Subsidiary Health Centre.

APPENDIX B

LIST OF NON-GOVERNMENT DISPENSARIES IN HOWRAH DISTRICT

Name	Police Station	Maintained by
Amta Charitable Dispensary	Amta	Zilla Parishad
Baltikuri ,, ,,	Jagachha	,,
Ban Harispur ,, ,,	Panchla	,,
Barda ,, ,,	Uday Narayanpur	,,
Belor ,, ,,	Sibpur	Howrah Municipality
Garbalia ,, ,,	Jagatballavpur	Zilla Parishad
Khantora ,, ,,	Domjur	Private
Khurut ,, ,,	Bantra	Howrah Municipality
Lilua (Belur) ,, ,,	Baly	Baly Municipality
Lilua S. J. ,, ,,	Lilua	Private
Mahiari L. K. ,, ,,	Domjur	,,
Mahiari K. P. Roy ,,	,,	Zilla Parishad
Makardaha Charitable Dispensary	,,	,,
Panpur ,, ,,	Amta	Private
Rajganj ,, ,,	Sankrail	Zilla Parishad
R. K. Mission ,, ,,	Baly	Private
Sailendra Smriti Seva Mandir Chairtable Disp.	Sibpur	,,
Salkia Charitable Dispensary	Golabari	Howrah Municipality
Sibpur ,, ,,	Sibpur	Private

(*contd.*)

LIST OF NON-GOVERNMENT DISPENSARIES IN HOWRAH DISTRICT—*contd.*

Name	Police Station	Maintained by
Singti Charitable Dispensary	Uday Narayanpur	Zilla Parishad
Syampur " "	Syampur	"
Udang " "	Amta	Amta Anchalik Parishad
Uday Narayanpur "	Uday Narayanpur	Private

APPENDIX C

LIST OF NON-GOVERNMENT HOSPITALS IN HOWRAH DISTRICT

Name	No. of beds
Hanuman Hospital	136
Howrah Tuberculosis Hospital	(only outdoor)
Kedarnath Arogya Bhavan	30
Lilua Maternity Home	(only outdoor)
North Howrah Hospital	50
Satyabala Infectious Diseases Hospital	52

APPENDIX D

LIST OF PRIVATE NURSING HOMES IN HOWRAH DISTRICT

Name	Address
Arabinda Nursing Home	97 Sri Arabinda Road, Salkia, Howrah.
Baly Prasuti Sadan	61 G. T. Road, Baly, Howrah.
Dr. Kundu's Clinic	74 Desapran Sasmal Road, Howrah.
Eye Clinic	South Jhapardah Road, Howrah.
Greenland Nursing Home	92 Desapran Sasmal Road, Howrah.
Howrah Nursing Home	80/1 Chintamani Dey Road. Howrah.
Maternity Bungalow	103/1A Kali Kundu Lane, Howrah.
Maternity Home	132 Makardah Road, Howrah.
National Clinic	52 Abul Kalam Azad Road, Howrah.
Seva Niketan	129 Netaji Subhas Road, Khurut, Howrah.
Sibpur Nursing Home	49/4 Kali Kumar Lane, Sibpur, Howrah.
Sri Nursing Home	53/1/2 Dharamtala Lane, Sibpur, Howrah.

CHAPTER XV

PUBLIC LIFE AND SOCIAL SERVICE ORGANIZATIONS

REPRESENTATION OF THE DISTRICT IN THE UNION AND STATE LEGISLATURES

Vidhan Sabha (Legislative Assembly)

During the first General Elections held in 1952, the Howrah district was represented in the West Bengal Legislative Assembly by 16 members elected from 14 constituencies of which 2 were double-membered. These 14 constituencies were Syampur (Syampur police station excluding 3 unions), Uluberia (Uluberia, Bauria and 1 union of Syampur police stations), Bagnan (2 unions of Syampur police station and the Bagnan police station excluding 3 unions), Amta South (2 unions of Bagnan and 5 unions of Amta police stations), Amta Central (1 union of Bagnan and 7 unions of Amta police stations), Amta North (8 unions of Amta police station), Sankrail (Sankrail and Jagachha police stations; Panchla police station excluding 1 union and 1 ward of Howrah Municipality), Jagatballavpur (Jagatballavpur police station and 2 unions of Panchla police station), Howrah North, Howrah East and Howrah West (each containing two wards of Howrah Municipality), Howrah South (containing 3 wards of Howrah Municipality), Domjur (Domjur police station), and Baly (Baly police station). Of these, the Uluberia and Sankrail constituencies were double-membered. Two seats were reserved for Scheduled Caste candidates, one each in Uluberia and Sankrail.

During the second General Elections held in 1957, there were 13 constituencies in the district, returning 15 Assembly representatives. The constituency which ceased to exist was within Amta and Bagnan police stations which previously formed 3 constituencies—Amta South, Amta North and Amta Central and were now reorganized into 2 constituencies— Amta East and Amta West. There were 2 double-membered constituencies, Sankrail and Uluberia each having a seat reserved for Scheduled Caste candidates.

During the third General Elections held in 1962, there were 15 single membered constituencies in the district, double-membership from a constituency having been abolished meanwhile under the Two Member Constituency Abolition Act of 1961. The 2 new constituencies were carved out from the two erstwhile double-membered constituencies, Sankrail and Uluberia; the former Sankrail constituency was divided into Panchla and Sankrail constituencies and the previous Uluberia constituency into Uluberia North and Uluberia South. The Panchla constituency comprised Panchla and Bauria police stations while the Sankrail police station constituted the Sankrail constituency. Uluberia North constituency had within its

jurisdiction 5 unions of the Uluberia and 1 of Bagnan police stations, while Uluberia South constituency had the rest of the Uluberia and 2 unions of Syampur police stations. Another important change took place during these elections; the two Amta constituencies were renamed as Amta and Uday Narayanpur—the former containing 8 unions of Amta and 1 union of Uday Narayanpur police stations, while the latter comprised the rest of the two police stations. As previously, 2 seats were reserved for Scheduled Caste candidates, one at Sankrail and the other at Uluberia North.

During the fourth General Elections, there were 16 constituencies in the district, returning an equal number of Assembly representatives. Certain re-adjustments of areas of constituencies were made before these elections; two new constituencies—Sibpur and Kalyanpur—were forged while the Howrah West and Howrah East constituencies were abolished with the creation of the Howrah Central constituency. The Sibpur constituency came into existence with 10 wards of the Howrah municipal area and the Kalyanpur constituency covered 8 Anchals of Amta and 7 of Bagnan police stations. The two Scheduled Caste reservations, however, continued in the same constituencies, Sankrail and Uluberia.

Lok Sabha (House of the People)

During all the four General Elections, there were two single-membered Lok Sabha constituencies in the district, namely Howrah and Uluberia, the boundaries of which underwent slight changes from one election to another. During the first General Elections, the whole of Uluberia subdivision was in the Uluberia parliamentary constituency, but Domjur and Baly police stations of the Sadar subdivision were excluded from the Howrah constituency and included in a neighbouring one, Serampore. During the second General Elections, the Howrah Lok Sabha constituency comprised the whole of the Sadar subdivision minus Sankrail and Panchla police stations which, together with the whole of Uluberia subdivision, excluding 8 unions of Syampur police station, constituted the Uluberia parliamentary constituency. These 8 unions formed part of the Tamluk Lok Sabha constituency of Midnapur district. In the third General Elections, however, the whole of the district was contained in these two constituencies; the Howrah constituency consisting of Howrah East, Howrah South, Howrah West, Howrah North, Baly, Domjur and Jagatballavpur Assembly constituencies, while the Uluberia parliamentary constituency comprised Panchla, Sankrail, Uluberia North, Uluberia South, Syampur, Bagnan, Uday Narayanpur and Amta Assembly constituencies. In the fourth General Elections the Howrah Lok Sabha constituency covered Baly, Howrah North, Howrah Central, Howrah South, Sibpur, Domjur and Sankrail Assembly constituencies and the Uluberia constituency had in it Uluberia North, Uluberia South, Syampur, Bagnan, Kalyanpur and Uday Narayanpur Assembly constituencies while two Assembly

constituencies of this district, Jagatballavpur and Panchla, went over to the Serampore parliamentary constituency in Hooghly district.

Vidhan Parishad (Legislative Council)

Howrah district returns 4 members from 3 Council constituencies, namely (*i*) the double-membered Howrah Local Authorities constituency comprising the whole district, (*ii*) the West Bengal South-East Graduates' constituency which it shares with 3 other districts, Murshidabad, Nadia and 24-Parganas, and (*iii*) the West Bengal South-East Teachers' constituency shared with the districts of Murshidabad, Nadia and Hooghly.

POLITICAL PARTIES AND ORGANIZATIONS

There are no political parties exclusive to the district as such; those with Statewide or nationwide platforms have their local organizations here and operate through them. On the basis of participation in the four General Elections it appears that the Congress, the Forward Bloc (Marxist), the Communist Party of India, the Jan Sangh and the Praja Socialist Party were the main political organizations whose influence could be felt in the public life of the district. During the first General Elections, however, the Forward Bloc (Ruikar), the Krishak Majdoor Praja Party, the Revolutionary Communist Party of India, the Socialist Party, the Ram Rajya Parishad and the Hindu Mahasabha also took the field. But during the second, only the bigger parties remained in the contest. The third General Elections saw the Swatantra Party making its debut as also the reappearance of the Forward Bloc (Marxist) and the Forward Bloc (Ruikar) parties without their suffixes. Another shortlived party, the S.B.P., figured only in the third General Elections. During the fourth, the Communists fought from two platforms, the Communist Party of India and the Communist Party of India (Marxist). In all the four elections, a number of independents took the field as usual.

Besides the four General Elections, two by-elections were held in the district, one in respect of the Bagnan Assembly constituency following the second General Elections and the other in respect of the Uluberia North (SC) constituency following the fourth Elections.

The sentiments of a socially and politically conscious community do not always find expression through political parties alone; they also manifest themselves through non-political forums like local clubs etc. of which a large number, with diverse objectives, functions in Howrah district. But an analysis of the public life of the district is likely to suffer from an insufficiently objective approach if such amorphous associations are taken into account It would, therefore, be prudent to base our examination on the results of the last four General Elections held over a period of 15 years from 1952 to 1967.

General Elections: Vidhan Sabha

In the first General Elections 128 candidates (constituting the largest aggregate so far) contested for 16 seats from the 14 Assembly constituencies. Of them 16 were put up by the Congress, 10 by the Jan Sangh, 9 by the Forward Bloc (Marxist), 7 by the Krishak Mazdoor Praja

Party, 6 by the Communist Party of India, 5 by the Socialist Party, 3 by the Ram Rajya Parishad, 2 each by the Revolutionary Communist Party of India and the Hindu Mahasabha and 1 by the Forward Bloc (Ruikar). Besides, there were 67 independent candidates. There was no straight contest in any of the constituencies; the number of rivals varied between 6 at Amta South and Howrah East to as many as 16 at Sankrail. As has been indicated earlier, the Congress set up candidates for all the seats; the Forward Bloc (Marxist) had candidates in Syampur, Uluberia (2 candidates), Bagnan, Amta Central, Sankrail (2 candidates), Howrah West and Baly; the Communist Party of India fought from Amta South, Amta Central, Howrah North, Howrah South, Domjur and Baly and Jan Sangh contested from Syampur, Amta South, Amta Central, Sankrail, Jagatballavpur, Howrah North, Howrah East, Howrah South, Howrah West and Baly.

First General Elections, 1952

The Congress won 8 seats from Howrah East, Howrah West, Howrah South, Baly, Bagnan, Amta South, Amta Central and Jagatballavpur; the Forward Bloc (Marxist) captured the Syampur seat as also all four seats from the double-membered constituencies of Uluberia and Sankrail; C.P.I. candidates were returned from Howrah North and Domjur, while one independent candidate won from Amta North. Of the total 5,09,935 valid votes polled, the Congress secured 34.6 per cent, the Forward Bloc (Marxist) 25.8 per cent, the C.P.I. 8.3 per cent, the K.M.P.P. 3.9 per cent, the Jan Sangh 2.6 per cent, the R.C P.I. 1.2 per cent, the others even less. The independent candidates, taken together, got 22.0 per cent of the valid votes. Of the constituencies returning Congress candidates, Howrah East alone provided an absolute majority to the winner by voting 56.61 per cent for him; the runner-up was an independent candidate with only 38.78 per cent of the votes The Congress won Amta Central seat by polling 36.93 per cent, Amta South by 36.12 per cent, Bagnan by 33.09 per cent, Howrah South by 38.04 per cent, Baly by 41.97 per cent, Howrah West by 34 6 per cent and Jagatballavpur by 29.93 per cent. These winners were trailed at Amta Central by the K.M.P.P. with 25.53 per cent, at Amta South by the Jan Sangh with 27.28 per cent, at Bagnan by the Forward Bloc (Marxist) with 30.06 per cent, at Howrah South by the C.P.I. with 26.42 per cent, at Baly by the Forward Bloc (Marxist) with 29.53 per cent, at Howrah West by an independent candidate with 22.54 per cent and at Jagatballavpur by another independent candidate with 18.47 per cent of the valid votes. The Forward Bloc (Marxist) candidate at Syampur won by a marginal absolute majority with 50.99 per cent while his nearest rival put up by the Congress secured only 30.68 per cent of the total valid votes. From the two double-membered constituencies of Sankrail and Uluberia, all the four Forward Bloc (Marxist) candidates won with 27.38 and 22.03 per cent of the votes at the

former, and 29.79 and 20.73 per cent at the latter. In all four cases the runners-up were Congress nominees who polled 16.45 and 15.47 per cent of the valid votes in the former and 21.61 and 18.83 per cent in the latter. C.P.I. candidates won with absolute majorities at Domjur with 54.96 per cent and at Howrah North with 51.01 per cent of the total valid votes far outpacing the next best candidates of the Congress who secured 19.71 per cent and 13.98 per cent respectively. The independent contestant from Amta North also won with an absolute majority of 53.64 per cent of valid votes being followed by a Congress candidate with only 28.09 per cent.

Second General Elections, 1957

During the second General Elections, 45 candidates fought for the 15 seats from 13 constituencies. The Congress put up candidates for all the seats; the Forward Bloc (Marxist) contested from 7 constituencies [Syampur, Uluberia (both), Amta Central, Sankrail, Jagatballavpur and Howrah South]; the C.P.I. from 6 (Bagnan, Sankrail, Howrah North, Howrah East, Domjur and Baly); the newly formed Praja Socialist Party from 2 (Amta South and Howrah West) and Jan Sangh from only one (Amta Central). There were only 14 independent candidates as against 67 in the preceding elections. Another notable feature was the elimination of smaller political parties and gathering of forces under a few, namely the Congress, the Forward Bloc (Marxist), the C.P.I. and the P.S.P.

Straight contest between the Congress and the Forward Bloc (Marxist) parties took place in 3 constituencies, Uluberia, Jagatballavpur and Howrah South, while more than 2 candidates took the field elsewhere. The Congress captured 5 seats, the Forward Bloc (Marxist) 5, C.P.I. 4 and P.S.P. one. While the Forward Bloc (Marxist) maintained their previous strength of 5 Assembly seats, the Congress suffered a loss of 3 while the C.P.I. gained two more seats. The Congress won from Baly, Howrah West, Howrah East, Uluberia (one seat) and Amta West; the Forward Bloc (Marxist) took away Jagatballavpur and Howrah South from the Congress fold but conceded one seat each from Uluberia and Sankrail to the Congress and the C.P.I. The Communists retained the 2 seats at Domjur and Howrah North and added one from Sankrail and another from Bagnan. The Amta East seat went to the P.S.P.

The Congress could not score an absolute majority in any of the 5 constituencies from which they won. Their biggest poll came from Baly where they secured 48.80 per cent of the total valid votes. In Howrah East, they obtained 47.40 per cent, in Howrah West 39.20 per cent, in Amta West 42.50 per cent and in Uluberia (SC) 25.70 per cent of votes. In Baly and Howrah East, they were closely followed by the C.P.I. with 47.10 and 44.60 per cent of the total valid votes respectively. In Howrah West, a P.S.P. candidate with 37.10 per cent, in Amta West, an independent candidate with 28.02 per cent and in Uluberia (SC) a Forward Bloc (Marxist) candidate with 24.40 per

cent of the valid votes came next to the winning Congress candidates. The Forward Bloc (Marxist) won 3 of their 5 seats with absolute majorities—Howrah South with 60.20 per cent, Jagatballavpur with 58.40 per cent and Syampur with 54.50 per cent of the total valid votes. In Uluberia (General) and Sankrail (SC) constituencies, however, they secured only 26.60 and 27.46 per cent of the total votes respectively. At Howrah South, Jagatballavpur, Syampur, Uluberia (General) and Sankrail (SC) constituencies, the Congress polled 39.80, 40.60, 43.00, 23.30 and 12.87 per cent of the valid votes respectively to secure the second best positions. The largest majority during the second General Elections was won by the C.P.I. in Bagnan where they polled 60.25 per cent of the total valid votes. In Domjur constituency they also had an absolute majority with 60.20 per cent. In Howrah North, they came out successful with 47.30 per cent and at Sankrail with 29.39 per cent of the valid votes. In all these constituencies, the C.P.I. was trailed by the Congress with 37.25, 38.10, 46.80 and 14.65 per cent of the votes, in that order. At Amta East. the P.S.P. candidate was returned with an absolute majority of 52.50 per cent of the votes being followed by the Congress with 47.25 per cent.

Although the Congress lost 3 seats during the second General Elections as compared to the first, their overall polling recorded a rise of 6.3 per cent and stood at 40.9 per cent of the total 6,15,274 votes cast in the district. The C.P.I. and the Forward Bloc also bettered their following by securing 20.3 and 26.5 per cent of the total valid votes and increasing their previous records by 12.0 and 0.7 per cent respectively. The new entrant, P.S.P., secured 4.5 per cent and all independent taken together 7.1 per cent of the valid votes cast. This all-round increase was possible due to the elimination of the smaller parties and a considerable reduction in the number of the independent candidates.

By-elections: Bagnan constituency: January 1959

The by-election at Bagnan was caused by the resignation of the sitting C.P.I. candidate and was held on January 27, 1959. There were 5 candidates, one each from the Congress, the Communist Party of India, the Forward Bloc (Marxist), the Jan Sangh and an independent contestant. 62.3 per cent of the voters exercised their franchise; during the second General Elections the percentage was 57.7. The seat again went to the C.P.I. which secured 56.00 per cent of the valid votes being trailed by the Congress with 34.6 per cent.

Third General Elections, 1962

During the third General Elections, there were 51 candidates contesting for 15 seats, one each from the same number of constituencies. The Congress fielded candidates in all the constituencies. The Forward Bloc (Marxist) party was politically replaced by the Forward Bloc which set up 7 candidates from Syampur, Uluberia North, Uluberia South, Uday Narayanpur, Jagatballavpur, Howrah South and Panchla. The C.P.I. also had 7 candidates in Bagnan, Amta,

Sankrail, Howrah North, Howrah East, Domjur and Baly. The P.S.P. put up a larger number of candidates this time, 5 in all, from Uluberia South, Bagnan, Amta, Sankrail and Howrah East. The Jan Sangh fielded 5 candidates from Uday Narayanpur, Howrah East, Howrah South, Domjur and Baly constituencies. Two new parties, the Swatantra Party and the S.B.P., appeared on the political scene this time, the former with 3 candidates from Amta, Howrah North and Panchla constituencies and the latter with one from Uday Narayanpur. There were, besides, 8 independent candidates. It is to be noticed that while the number of independents decreased still further, the political parties put up between them a larger number of candidates. This increase was most marked in the case of the Jan Sangh and the P.S.P. which had only one and two candidates respectively during the preceding Elections. There were two straight contest—at Uluberia North and Jagatballavpur—both between the Congress and the Forward Bloc. In other constituencies contest were multi-cornered ranging from 5 at Uday Narayanpur and Howrah North to 3 at Syampur, Sankrail, Howrah West, Howrah South, Domjur, Baly and Panchla; elsewhere the contestants numbered four for each seat.

The Congress won 9 seats—their biggest tally so far—from Howrah East, Howrah North, Baly, Jagatballavpur, Uluberia South, Syampur. Bagnan, Uday Narayanpur and Amta. The Forward Bloc lost 2 seats and were successful only from Howrah South, Panchla and Uluberia North. The C.P.I. likewise suffered a reduction in ranks by losing their 2 comparatively safe seats at Bagnan and Howrah North. The Howrah North seat went to the Congress this time, having been with the C.P.I. during the two preceding Elections. The Bagnan constituency had opted for the Congress during the first Elections but had been with the C.P.I. during the second as also during the by-election following it. It returned to the Congress this time. The C.P.I., however, held on to their Domjur and Sankrail seats. The remaining Howrah West seat went to an independent candidate for the first time and was a loss for the Congress. The Congress had absolute majorities in 8 contests, their best performance being at Howrah North where they won with 61.00 per cent of the total valid votes. At Jagatballavpur the Congress won with 59.6 per cent, at Syampur 55.2 per cent, at Uluberia South 54.6 per cent, at Bagnan 50.8 per cent, at Amta 50.3 per cent, at Uday Narayanpur 50.2 per cent, at Baly 50.6 per cent and at Howrah East 49.08 per cent of the total votes. They were followed by the C.P.I. with 36.8 per cent of the votes at Howrah North, 45.9 per cent at Bagnan, 39.2 per cent at Amta, 46 per cent at Howrah East and 46.6 per cent at Baly and by the Forward Bloc with 40.4 per cent at Jagatballavpur, 38.7 per cent at Uluberia South, 43.88 per cent at Syampur and 35.2 per cent at Uday Narayanpur. The Forward Bloc secured two absolute majorities at Uluberia North (SC) and Howrah South where they collected 52.5 and 51.7

per cent of the votes. They also captured the Panchla seat scoring 48.3 per cent. In all these three cases, they were trailed by the Congress with 47.5, 42 and 48.3 per cent of the votes respectively. The C.P.I. had a marginal absolute majority at Sankrail (SC) constituency with 50.4 per cent of votes and a little less at Domjur with 49.4 per cent while the Congress followed them with 48.2 per cent at Sankrail and 47.9 per cent at Domjur. The lone independent candidate was returned with 44.6 per cent of the votes from the Howrah West constituency where the Congress collected 38.7 per cent.

During the third General Elections the Congress mustered 60 per cent of the representation from the district with 9 seats out of 15. Their total poll percentage, however, rose by only 9.1 bringing it to 50 per cent of the 6,75,360 valid votes cast in the district. The C.P.I. lost 50 per cent of the seats but increased their poll percentage by 1.3. The Forward Bloc suffered a 40 per cent decrease in their representational strength consequent upon a fall of only 6.3 per cent in their poll percentage. [The comparison is, of course, between the Forward Bloc (Marxist) of the second Elections and the Forward Bloc of the third]. The Jan Sangh secured no seat in any of the elections but their poll percentage rose from 0.7 per cent in 1962 to 2.0 per cent in 1967. The biggest reduction, however, befell the P.S.P., they not only lost their only seat but their poll percentage came down from 4.5 to 0.8 only. The independents, taken together, polled 4.7 per cent of the total valid votes which also meant reduction of 2.4 per cent.

Fourth General Elections, 1967

During the fourth General Elections, there were 16 constituencies in the district with 16 seats in all for which the number of contestants rose to 56. The increase is explained by the fact that besides the Congress, which put up candidates in all the constituencies, the Communists fought this time from two platforms—the Communist Party of India and the Communist Party of India (Marxist). While in the third Elections there were 7 candidates from the undivided Communist Party, 11 candidates from the Communist Party of India (Marxist) and 2 from the Communist Party of India took the field during the fourth. Besides, there were one P.S.P., 2 Jan Sangh, 10 Forward Bloc and 14 independent candidates. The Forward Bloc fought from Howrah Central, Sibpur. Panchla, Jagatballavpur, Uday Narayanpur, Kalyanpur, Amta, Syampur, Uluberia North and Uluberia South; the C.P.I. (Marxist) from Uluberia North, Uluberia South, Bagnan, Amta, Uday Narayanpur, Sankrail, Jagatballavpur. Sibpur, Howrah South, Domjur and Baly; the C.P.I. from Sankrail and Howrah South; the Jan Sangh from Howrah North and Howrah Central and the P.S.P. from Kalyanpur. The Swatantra Party and the S.B.P. did not participate in these Elections. Syampur saw a straight contest between the Congress and the Forward Bloc while in the remaining constituencies the number of contestants varied from 5 in Howrah

North and Uluberia South to 3 in Uluberia North, Bagnan, Amta, Uday Narayanpur, Sankrail, Jagatballavpur, Sibpur, Domjur and Panchla, the other constituencies having 4 candidates each.

The Congress captured 9 of the 16 Assembly seats, the C.P.I. (Marxist) and the Forward Bloc won 3 each and the remaining seat went to an independent candidate. The Congress was successful at Baly, Howrah North, Howrah Central, Howrah South, Sibpur, Domjur, Panchla, Sankrail (SC) and Bagnan; the C.P.I. (Marxist) at Jagatballavpur, Amta and Uday Narayanpur; the Forward Bloc at Uluberia North (SC), Uluberia South and Syampur and the independent candidate at Kalyanpur. Congress lost their Jagatballavpur, Uday Narayanpur and Amta seats to the C.P.I. (Marxist) but dislodged the latter from Domjur and Sankrail (SC). In like manner, Congress's loss of Syampur and Uluberia South to the Forward Bloc was made up by the capture of the erstwhile Forward Bloc seats at Panchla and Howrah South. All the five constituencies comprised within the Howrah and Baly municipal areas opted this time for the Congress while the seven constituencies which chose non-Congress legislators were rural in character. The Congress had absolute majorities of 54.10, 51.78 and 50.72 per cent of the valid votes at Howrah South, Howrah North and Sankrail (SC) respectively and won with 48.60 per cent of the votes at Domjur, 43.80 per cent at Baly, 43.28 per cent at Panchla, 41.00 per cent at Howrah Central, 37.45 per cent at Sibpur and 37.38 per cent at Baly. They were followed by the Forward Bloc at Sibpur with 34.96 per cent; by the C.P.I. (Marxist) at Domjur with 47.20 per cent, at Sankrail (SC) with 32.83 per cent, at Howrah South with 34.27 per cent and at Bagnan with 35.74 per cent; by the C.P.I. at Baly with 40.7 per cent; by independent contestants at Howrah North with 38.33 per cent, at Howrah Central with 32.48 per cent and at Panchla with 27.31 per cent of the votes. The Forward Bloc had an absolute majority at Syampur with 57.35 per cent of the total votes, but at the other two of their winning seats, Uluberia North (SC) and Uluberia South, they secured 36.16 and 38.05 per cent of the votes respectively. They were followed by the Congress, at Uluberia South with 32.73 per cent and at Syampur with 42.64 per cent and by the C.P.I. (Marxist) at Uluberia North (SC) with 32.24 per cent of the votes. The C.P.I. (Marxist) had clean majorities at Amta (58.72 per cent) and Uday Narayanpur (54.25 per cent) and won with 49.22 per cent of the votes at Jagatballavpur. In all these three constituencies they were trailed by the Congress with 39.2 per cent, 41.09 per cent and 41.01 per cent of votes respectively. The independent winner at Kalyanpur received 46.02 per cent of the total valid votes with a Congress nominee following with 39.69 per cent.

Although the fourth General Elections proved to be a turning-point in the political history of West Bengal, it produced little change in

the Howrah district where the Congress captured 9 of the 16 Assembly seats just as they did during the preceding elections. The Forward Bloc repeated their performance of the third General Elections by winning 3 seats again and the C.P.I. (Marxist) got only one more seat than that of the undivided C.P.I. The independent candidates' hold on the electorate was limited to only one seat in both the third and fourth Elections. With regard to the overall poll percentages, the Congress, during the fourth General Elections, suffered a reduction of 6.7 per cent and captured 43.3 per cent of the total 8,46,611 votes cast in the district; the C.P.I. (Marxist) collected 27.3 per cent while the C P.I. got only 1.6 per cent. During the previous elections, the C.P.I. had received 21.6 per cent of the votes. The Forward Bloc suffered some decline in popularity as they received 14.7 per cent of the total valid votes reducing their poll percentage by 5.5. The P.S.P. experienced a further set back by mustering only 0.1 per cent of the total votes, thereby losing 0.7 per cent from their preceding performance. The independents, taken together, increased their poll percentage by 7.3 to bring it to 12.0 per cent of the votes cast in the district.

By-election in Uluberia North (SC) constituency: May 1967

The by-election was caused by the resignation of the winning Forward Bloc candidate who was also elected from the Bagda constituency of the 24-Parganas district during the fourth General Elections. He chose to retain his seat from Bagda and resigned from the Uluberia North (SC) constituency.

During the fourth General Elections, the contest in this constituency was a three-cornered one between the Forward Bloc, the Communist Party of India (Marxist) and the Congress. But the by-election taking place only three months later on May 14, 1967 was fought straight between the Forward Bloc and the Congress. Of the total electorate of 79,029 in this constituency, 68.97 per cent had exercised their franchise during the General Elections while the interest shown in the by-election was much less as only 50.17 per cent of the electorate cast their votes. The Forward Bloc candidate was returned again with a convincing absolute majority of 73.55 per cent of the total valid votes of which only 26.45 per cent went to the Congress candidate. During the preceding General Elections, the Forward Bloc, the C.P.I. (Marxist) and the Congress candidates had secured 36.16, 32.24 and 31 60 per cent of the valid votes respectively. During the by-election, the Forward Bloc (which was supported by all non-Congress parties) registered a gain of 37.39 per cent in electoral support while the corresponding loss for the Congress was 5.15 per cent.[1]

Lok Sabha: First General Elections

During the first General Elections, there were two Parliamentary constituencies in the district, Howrah and Uluberia, and 5 candidates

[1] Based on news items in the Statesman, the Hindusthan Standard and the Ananda Bazar Patrika, Calcutta, dated May 16, 1967.

(one each from the Congress, the Communist Party of India, the Krishak Majdoor Praja Party, the Socialist Party and an independent) contested from the former while 4 candidates (one each from the Congress and the Forward Bloc (Marxist) and 2 independents) fought from the latter. Both the Congress candidates were returned — at Howrah with 34.22 per cent of the total 1,78,071 and at Uluberia with 41.48 per cent of the total 1,84,939 valid votes cast. The nearest rival at Howrah was the C.P.I. candidate with 33.22 per cent and at Uluberia the Forward Bloc (Marxist) candidate with 37.48 per cent of the votes.

Second General Elections

During the second General Elections, the constituencies remained the same and 3 candidates (one each from the Congress, C.P.I. and Jan Sangh) fought from Howrah and 3 contestants (one each from the Congress, Forward Bloc (Marxist) and an independent) contested from Uluberia. This time the Jan Sangh was the new challenger for the Howrah seat, the K.M.P.P. and the Socialist Party had retired, and the number of independent candidates fell from three to one. The C.P.I. candidate won from Howrah and the Forward Bloc (Marxist) candidate from Uluberia thereby ousting the Congress from both the constituencies. During the first elections, the C.P.I. had polled 33.22 per cent of the votes which was only one per cent less than that of the winning Congress candidate but this time they captured 48.30 per cent of the total 2,24,098 valid votes with the Congress coming next with 30.08 per cent. At Uluberia the Forward Bloc (Marxist) had secured 37.48 per cent votes during the first elections but during the second they had an absolute majority with 51.72 per cent of the total 2,32,984 valid votes, the Congress following them with 39.84 per cent.

Third General Elections

During the third General Elections, the position at the Howrah parliamentary constituency remained the same; the Congress, the C.P.I. and the Jan Sangh contested the seat as before and the C.P.I. won it with 42.4 per cent of the total 3,25,290 valid votes, the Congress trailing close behind with 41.2 per cent. In Uluberia, two more parties. viz. the P.S.P. and the Swatantra Party entered the field but the independent candidate withdrew. The winning Congress candidate polled 48.6 per cent of the total 2,94,536 votes while his nearest rival of the Forward Bloc got 44.9 per cent. The Congress having lost in both the constituencies during the preceding elections, staged a come-back this time by winning the Uluberia seat by a sizeable margin from the Forward Bloc and losing to the C.P.I. in the Howrah constituency by the slender margin of only 1.2 per cent of the votes.

Fourth General Elections

The fourth General Elections saw three-cornered fights in both the constituencies—among the Congress, the C.P.I. and the C.P.I. (Marxist) at Howrah and the Congress, the Forward Bloc and the C.P.I. (Marxist) at Uluberia. The Jan Sangh, which had contested the Howrah seat during the two previous Elections dropped out;

so did the P.S.P. and the Swatantra Party from the Uluberia constituency. The Congress re-captured both the seats; at Howrah they won with 46.65 per cent of the total 3,78,270 votes with the C.P.I. (Marxist) following with 35.47 per cent while the C.P.I., the sitting party, got only 17.88 per cent. At Uluberia, the Congress won with 38.8 per cent of the total 3,70,582 votes cast while the C.P.I. (Marxist) and the Forward Bloc followed with 33.9 per cent and 27.26 per cent respectively.

HOWRAH DISTRICT: REPRESENTATION IN THE VIDHAN SABHA

	1952	1957	1962	1967
Congress	8	5	9	9
F. B. (M)	5	5	—	—
F. B.	—	—	3	3
C. P. I.	2	4	2	—
C. P. I. (M)	—	—	—	3
P. S. P.	—	1	—	—
Independent	1	—	1	1
Total representation	16	15	15	16

HOWRAH DISTRICT: POLL PERCENTAGES IN VIDHAN SABHA ELECTIONS

Parties	Percentage of votes polled 1952	1957	1962	1967	Percentage variations between: Cols. 2 & 3	Cols. 2 & 4	Cols. 2 & 5	Cols. 3 & 4	Cols. 3 & 5	Cols. 4 & 5
Congress	34 6	40.9	50.0	43.3	+ 6.3	+15.4	+8.7	+ 9.1	+ 2.4	+ 6.7
C.P.I.	8.3	20.3	21.6	1.6	+12.0	+13.3	−6.7	+ 1.3	−18.7	−20.0
C.P.I. (M)	—	—	—	27.3	—	—	—	—	—	—
F.B. (M)	25 8	26 5	—	—	+ 0.7	—	—	—	—	—
F.B. (Ruikar)	0 1	—	—	—	—	—	—	—	—	—
F.B.	—	—	20.2	14.7	—	—	—	—	—	− 5.5
Jan Sangh	2.6	0.7	2 0	1.0	− 1.9	− 0 6	− 1.6	+ 1.3	+ 0.3	− 1.0
K.M.P.P.	3.9	—	—	—	—	—	—	—	—	—
R.C.P.I.	1.2	—	—	—	—	—	—	—	—	—
Socialist	0.9	—	—	—	—	—	—	—	—	—
R.R. Parishad	0.4	—	—	—	—	—	—	—	—	—
H. Mahasabha	0 2	—	—	—	—	—	—	—	—	—
P.S.P.	—	4.5	0.8	0.1	—	+ 0.8	—	− 3.7	− 4.4	− 0.7
Swatantra	—	—	0.6	—	—	—	—	—	—	—
S.B.P.	—	—	0.1	—	—	—	—	—	—	—
Independents	22.0	7.1	4.7	12.0	−14.9	−17.3	−10.0	− 2.4	+ 4.9	+ 7.3
Total	100.0	100.0	100.0	100.0						

HOWRAH DISTRICT: REPRESENTATION IN THE LOK SABHA

	1952	1957	1962	1967
Congress	2	—	1	2
C. P. I.	—	1	1	—
F. B. (M)	—	1	—	—
Total representation	2	2	2	2

HOWRAH DISTRICT: PERCENTAGES IN LOK SABHA ELECTIONS

Parties	Percentage of votes polled 1952	1957	1962	1967	Percentage variations between Cols. 2 & 3	Cols. 2 & 4	Cols. 2 & 5	Cols. 3 & 4	Cols. 3 & 5	Cols. 4 & 5
Congerss	38.00	35.05	44.70	42.80	−2·95	+6.70	+4.80	+9.65	+7.75	−1.90
F. B. (M)	19.14	26 36	—	—	+7.22	—	—	—	—	—
F. B.	—	—	21.33	13.50	—	—	—	—	—	−7.83
C. P. I.	16.35	23.70	22.23	09.00	+6.35	+5.88	−7.35	−1.47	−14.70	−13.23
C. P. I. (M)	—	—	—	34.70	—	—	—	—	—	—
K. M. P. P.	10.24	—	—	—	—	—	—	—	—	—
Socialist	01.25	—	—	—	—	—	—	—	—	—
P. S. P.	—	—	01·14	—	—	—	—	—	—	—
Jan Sangh	—	10.60	08·60	—	—	—	—	2.00	—	—
Swatantra	—	—	02.00	—	—	—	—	—	—	—
Independents	15.02	04.29	—	—	10.73	—	—	—	—	—
Total	100.00	100.00	100.00	100.00						

An analysis: Vidhan Sabha elections

During the first Vidhan Sabha Elections, the Congress polled 34.6 per cent of the total votes to capture as many as 50 per cent of the seats from the district while all the non-Congress parties and independents taken together polled the remaining 65.4 per cent of the votes to gain 50 per cent of the Assembly representation. During the second General Elections, the Congress raised their poll percentage to 40.9 per cent—an addition of 6.3 per cent—but lost 3 of the Assembly seats. The Forward Bloc (Marxist), which polled only 26.5 per cent, got an even representation in the Assembly with the Congress while the C.P.I., with 20.3 per cent of the total votes, got 4 seats, the remaining seat going to the P.S.P. with 4.5 per cent electoral support. During the third Elections, the Congress bettered their poll percentage by 9.1 per cent and collected 50 per cent of the total votes to capture 9 out of the 15 seats, i.e. 60 per cent of the total representation. This time, the C.P.I. got 21.6 per cent of the votes but lost two of their seats and were left with only two in the Assembly. The Forward Bloc, on the other hand, slided down by 6.3 per cent in comparison to the performance of the Forward Bloc (Marxist) in the second Elections and lost two Assembly seats. The fourth Elections saw a decrease of 6.3 per cent in the poll percentage of the Congress which, however, maintained the same Vidhan Sabha representation just as the Forward Bloc lost 5.5 per cent but had their 3 seats intact. The C.P.I., which commanded 21.6 per cent of electoral support during the third Elections, could muster only 1.6 per cent during the fourth and the C.P.I. (Marxist) collected 27.3 per cent of the total votes.

The foregoing tables would also indicate that smaller parties are being progressively eliminated from public choice. The Jan Sangh, R.C.P.I., Hindu Mahasabha, P.S.P. and Ram Rajya Parishad are all but out and the Swatantra Party, which, incidentally, has become the largest single opposition party in the Parliament after the fourth Elections, have very little to do with Howrah politics now. They made their appearance only once during the third Elections and have departed since. Independents, however, have lately made their presence felt after successive recessions during the second and the third General Elections.

The common belief that communism has its strongest bases in industrial areas is not borne out by election results from the Howrah conurbation region. During the first General Elections there were 4 Assembly constituencies within the Howrah municipal area and one within Baly of which 4 went to the Congress and only one to the C.P.I. During the second, three seats went to the Congress, one for the Forward Bloc (Marxist) and another for the C.P.I. During the third, 3 remained with the Congress, one with the Forward Bloc while the other chose an independent. During

the fourth Elections all these 5 seats were captured by the Congress.[1]

Lok Sabha elections

A definite trend in public opinion is also discernible from the Lok Sabha elections. During the first General Elections, the Congress captured both the seats with only 38 per cent of the total valid votes, the remaining 62 per cent being shared by 4 candidates from as many political parties and 2 independents. During the second, the non-Congress contestants numbered only 3 from the two constituencies and although the electoral support for the Congress was reduced by only 2.95 per cent, they lost both the seats. During the third, there were 5 candidates in all against the Congress which staged only a partial recovery by winning one of the seats although its poll percentage showed an increase of 9.65. During the fourth, almost identically with the trend in the Vidhan Sabha elections, Congress surrendered a marginal percentage of 1.90 of votes but seized both the seats with 3 candidates against them from the two constituencies. It should, however, be mentioned here that in all the four elections, it was the Congress alone which fielded candidates in both the parliamentary constituencies which was matched only by the C.P.I. (Marxist) during the fourth Elections. The poll percentage obtained by the Congress has, therefore, always been the aggregate of their total collections from both the constituencies while for all other parties, except the C.P.I. (Marxist) during the fourth Elections, this came from only one constituency.

A broad assessment of the political life of the district, as reflected in the four General Elections, would tend to show that the Congress appeared on the scene with a handicap which might not have been discernible during the first Elections owing to the general disunity amongst its large opposition. The handicap became fairly palpable during the second Elections when it fared worst. But the party substantially retrieved its position between the second and the third Elections and during the fourth, although there was a definite shift of public opinion towards the left, the Congress more or less held its ground because of their own performance in certain areas and due to the lack of homogeneity in the opposition in others.

[1] One point needs clarification here. An 'independent' candidate does not always mean one unattached to or unsupported by a political party. Instances are not rare when an 'independent' candidate may be sponsored by one or more political parties and the votes polled by him are, therefore, more a measure of the influence of these parties than his personal hold on the electorate. On the other hand, there may be 'independent' candidates put up by a political party not recognized by the Election Commission. For example, the Bangla Congress, a political party which fought the fourth General Elections, was not recognized by the Election Commission and their candidates were set up as independents. The candidate of this party who fought and won from the Kalyanpur Assembly constituency during the fourth General Elections was, on paper, an independent candidate. Since the present Gazetteer has to conform to the official recognitions extended by the Election Commission, such distinctions have not been specified in detail.

NEWSPAPERS & PERIODICALS

Old and defunct periodicals

Subhakaree, the first Bengali periodical of the district made its appearance in Baly in May 1862 to propagate the activities of the *Subhakaree Subhā* of that place. It was a monthly journal intended to fulfil the role of a scientific and literary magazine and contained articles on history, science and literature. From its second issue, it started including news items as well. After running for about three years, the *Subhakaree* was discontinued in 1865. Twentyfour years later, the elite of Uluberia brought out a Bengali fortnightly in 1886 under the title *Grāmbāsi* which was a political journal. It was converted into a weekly newspaper in 1889. The *Howrah Municipal Gazette*, the monthly organ of the Howrah Municipality, made its appearance next in 1948. In the same year another Bengali monthly, the *Nabya Bhārat*, dealing with news and current affairs, appeared from 93 Ramkrishnapur Lane, Howrah.

The Hindi speaking people of Salkia brought out in 1960 a literary and cultural monthly in Hindi entitled *Tarangini*. It was published from 55 Sri Aurobindo Road, Salkia, Howrah. The *Jāgrata Bhārat*, a quarterly magazine in Bengali specializing in news and views on current affairs, made its appearance in 1962 from 56 Buxarah Road, Howrah. Another Bengali periodical, the *Rekhā-Ô-Bāni*, a literary and cultural monthly, commenced publication in 1963 from 21/2 Sovan Chowdhury Lane, Salkia, Howrah. The *Uttar Path*, a literary and cultural quarterly in Bengali, first appeared in 1963 from 119 Netaji Subhash Road, Howrah.

Current periodicals

The periodicals now published from the district are mostly in the Bengali language. A few periodicals in English and in Hindi are also there. The *Howrāh Bārtā*, a fortnightly in Bengali, is published from 374 G.T. Road, Salkia. The *Desh Hitaishi*, the *Bichār* and the *Bāgnān Bārtā*, all prominent Bengali weeklies. come out from 15, Makardaha Road (Kadamtala), 11 Hem Chakrabarty Lane and Bagnan respectively. The *Prakāsh* and the *Sankar*, both weeklies in Hindi, published from Salkia and Lilua respectively, also deserve mention. These local journals mainly cater to news and views on current topics emphasizing those relating to the district. The *Jai Guru*, a fortnightly, and the *Sri Mā Sāradā*, a monthly, both in Bengali, published from Baly and Lilua respectively deal exclusively with religious and philosophical subjects. The only women's journal in the district, the *Ārya Nāri*, a monthly in Bengali, is published from 94 Santiram Rasta, Baly. Appearing from 8 Nityadhan Mukherji Road, the *Srama Bārtā*, a Bengali monthly, is the only and the most prominent labour-journal of the district.

The *Patabhumi*, a fortnightly, is published from 7 Baikuntha Chatterji Lane and the *Betāl Kathā* and the *Janabāni*, both monthlies, are published from 2 Ramgopal Smritiratna Lane and 5/1 Hari Kumar Banerji Lane respectively. The *Fasal* and the *Sankharôl*, both quarterlies, appear from 37 Kamini School Lane and Sankrail.

Another quarterly, the *Mohenjodaro*, published from 55/4 Natabar Pal Road, deserves mention. All these periodicals are in Bengali and deal with literary and cultural subjects. The tri-lingual journal, *Rekhā-Ō-Lekhā*, a monthly in English, Bengali and Hindi, comes out from 7 Benaras Road, Howrah. The *Sadgope Samāchār*, a Bengali quarterly organ of the Sadgope Association, is published from 7 Thakurdas Ghose Street, Belur Math.

Specialized journals

The 'Bengal Engineering College Annual', an exclusively technical magazine in English, is published by the B.E. College of Sibpur, Howrah. It appeared in 1949 and is perhaps the first technical journal of the district. It deals with structural engineering, civil engineering, architecture, town planning, mechanical engineering, electrical engineering, electronics, tele-communication engineering and metallurgy. The 'Bulletin of the Rotary Club of Howrah', an English weekly house journal, is published from 2/3 Lakshmi Narayan Chakravarti Lane. The 'Indalunion Bulletin', published separately in Bengali and Hindi, is the monthly house magazine of Indian Aluminium Co. Ltd. The 'Commerce Service Reporter', an English monthly, published from 24/6 Brindaban Mallik Lane, deals with commerce and industries exclusively. The 'Engineering Industries of Howrah' is published by the Howrah Manufacturers' Association from 198 Bellilious Road. The *Ānandam*, a Bengali journal appearing from the Ananda Niketan Kristisala of Nabasan, Bagnan, contains articles on museology, art and culture. Besides, many schools and colleges have their own magazines.

Calcutta newspapers

No daily newspaper is published in the district. The popular Calcutta dailies in English, Bengali or Hindi, like *The Statesman*, the *Amrita Bazar Patrika*, the *Hindusthan Standard* (all in English), the *Jugāntar*, the *Ānanda Bāzār Patrikā* and the *Dainik Basumati* (all in Bengali) and the *Sanmarg* and the *Biswamitra* (all in Hindi) are in common circulation in the district. Three prominent Bengali weeklies published from Calcutta, namely the *Desh*, the *Amrita*, and the *Sāptāhik Basumati* are also widely read.

VOLUNTARY SOCIAL SERVICE ORGANIZATIONS

Bantra Public Library

The oldest voluntary social service organization in the district, the Bantra Public Library, came into existence in 1884. It has been dealt with in Chapter XIII on education and culture.

Howrah Sporting Club

The Howrah Sporting Club was established in 1889 by the sport-lovers of the district. It is located in a two-storied building (built in 1902) at 8 Nityadhan Mukherji Road, Howrah-1 in front of the Howrah Maidan.

The object of the club is to promote physical culture and intellectual pursuits amongst the people of the locality. Its membership now totals 200 including Life and Honorary members. As it is one of the oldest clubs in West Bengal, many respectable citizens of Howrah and Calcutta are its patrons. The football and cricket teams

of the club are well-known in the sporting world of the State. It also sponsors various indoor games and runs tournaments for them. The club was the first winner of the Cricket League run by the Bengal Gymkhana for three successive years.

This club has a well equipped library containing about 6,000 books, both in English and Bengali. Free reading facilities are extended to its members and outsiders. The club also organizes occasional debates, musical soirees and dramatic performances.

Rāmkrishnapur Saṁsad

Rāmkrishnapur Saṁsad of 190 Ramkrishnapur Lane, Sibpur has a history of 67 years. It is primarily a socio-educational institution running a public library, a girls' school, a club for adult recreation and a charity wing for serving the poor and the needy. In 1900, late Nrisingha Basu of Howrah founded the Rāmkrishnapur Library at his own residence with only about two hundred books. In 1907 the Friends' United Club and the Aikya Samāj of the same locality merged with this institution. It was registered in 1916 and sponsored the establishment of the Rāmkrishnapur Bālikā Vidyālaya in 1920. It was renamed Rāmkrishnapur Saṁsad in 1930 and removed to its own building "Nrisingha Smriti Mandir" constructed in 1922-23. It is a three storied house with a spacious plot of land in front meant for accommodating a school building. In April 1967, the library of the Saṁsad contained 23,428 books, including periodicals. 4,217 readers on an average availed of the library facilities per month. The institution receives annual grants from the Howrah Municipality and the Government of West Bengal. Its girls' school with a roll strength of 652 is approved by the West Bengal Board of Secondary Education up to the School Final standard. The adult recreation section organizes frequent social meets and entertainments, runs competitions in indoor games and holds occasional seminars to discuss subjects of educational and cultural interests. The charity wing has been helping the poor and the needy of the locality in cash and in kind for the last seven decades.

Udāsin Din Dukhi Lāl Bābā Trust

The Udāsin Din Dukhi Lāl Bābā Trust, a registered organization established in 1901 and having its head office at 66 Grand Trunk Road, Lilua, perpetuates the memory of a philanthropic mendicant who for his religious fervour and benign simplicity was known to his votaries as Udāsin Din Dukhi Lāl Bābā. Social service was no less important to him than spiritual progress and he established educational institutions, maternity home, cattle asylums and agricultural farms at Birudiha, Panagarh and Syama-Biswanathpur in the district of Burdwan, at Palasdanga, Alampur, Dihipara, Jaynagar and Gopalpur in the district of Bankura and at Dankuni in the district of Hooghly. Besides the headquarters at Lilua, all these centres are run by the Trust with the help of mendicant disciples of Lāl Bābā and also by paid workers. In the Howrah district the Trust runs the Lāl Bābā Vidyālaya at Baly which is a Junior High School affiliated

to the Board of Secondary Education, West Bengal and having 17 teachers and 500 pupils 93% of whom do not have to pay any tuition fees. Bengali and Hindi are both used as the media of instruction. The institution receives substantial aid from the State Government. There are two free boarding houses attached to this school.

Gobardhan Sañgit Ô Sāhitya Samāj

The Gobardhan Sañgit Ô Sāhitya Samāj of 12 Shibgopal Banerji Lane, Salkia was founded in 1912 as a music school styled Salkia Sañgit Samāj by certain youngmen of the locality. It subsequently changed its name to the present one to perpetuate the memory of late Gobardhan Banerji, one of the founders. Promotion of music, dramatic performances and literature has been the object of the institution for which they have received help and guidance from eminent persons like Jaladhar Sen, Sarat Chandra Chattopadhyay, Amritalal Bose, Sisir Kumar Bhaduri, Profulla Chandra Ray, Jadunath Sarkar, Syamaprasad Mukerji and others. The Samāj also runs a sports section and a well equipped reading room for its members and outsiders. From time to time it organizes relief for the victims of natural calamities. The institution now owns its own building the ground floor of which was opend by Prof. Benoy Kumar Sarkar in January 1940 and the first floor by Pandit Bidhusekhar Sastri in July 1950.

Raspur Union Club

Raspur Union Club (formerly Tārā Nāṭya Samāj) was established in 1912 in the village of Raspur in Amta P.S. to promote the histrionic art. It also helps poor students and takes care of helpless widows of the locality. It is one of the oldest dramatic clubs of the district and receives an annual grant-in-aid from the State Government.

Ramakrishna Vivekananda Āshrama

Ramakrishna Vivekananda Āshrama of 4 Nashkarpara Lane, Kasundia, Howrah was established in 1916 by Swami Sivananda to propagate the ideals of Sri Ramakrishna, and Swami Vivekananda on the physical, educational, philanthropic and religious planes. The Āshrama is founded on the faith that soul force is the most potent thing on earth; hence special stress is laid on the spiritual growth of its members. Religious pursuits form the basis of the Āshrama life and facilities for prayer, meditation, worship and occasional festivals are afforded to the inmates. The worship of Sri Ramakrishna Deva is performed every day in the Āshrama temple where devotional songs are frequently sung in chorus. The birth anniversaries of Sri Chaitanya, Sri Ramakrishna, Sri Ma and Swami Vivekananda are observed besides the celebrations of Christmas Eve, Kalpataru Utsav, Durgā Puja, Sivarātri, Kāli Puja, Saraswati Puja, Doljātrā, Janmāṣṭami, Rāmnavami, Buddhotsav etc. Scriptural lectures are regularly held on Saturday evenings and religious meetings organized from time to time.

Anāth Bhāndār, the social service wing of the Āshrama, runs a charitable homoeopathic dispensary for catering to the needs of the poor. Free distribution of rice, clothes, blankets and money is also

arranged for the benefit of the distressed. In the attached gymnasium, started in 1933, some 40 youngmen take physical exercise regularly. A fully equipped children's park attracts about 100 youngsters each day. The foundation stone of the Āshrama's newly proposed 'Vivekananda Satavārshiki Bhavan' was laid on January 23, 1965.

Howrah Sevā Saṅgha

Established in 1923, the Howrah Sevā Saṅgha, since its inception, was associated with all national movements for attainment of the country's freedom. Its office and library are situated at 33/1 Narasingha Dutta Road and gymnasium and playground at 74 Kalachand Nundy Lane, Howrah. Affiliated to various Statewide organizations, it promotes physical culture, sports and games, cultural programmes and community worships. The first *Sārbajanin Durgotsav* (community worship of goddess Durgā) in Howrah district was sponsored by it in 1927. The Saṅgha also opened the Howrah branch of the Relief Welfare Ambulance Corps (R.W.A.C.) and serves the people of the district by providing them with ambulance service. Its present membership is 352.

Tarun Saṅgha

Tarun Saṅgha of village Baksara (P.S. Jagachha) was established in 1924 for doing social work on Gandhian lines. Its various wings include a gymnasium, a library, a drama section, a primary school, a night school and a crafts training centre for women. The library contains about 6,000 books and is recognized by the Government as a Rural Library. The primary school, the night school and the women's craft centre are located at the three-storied building of the institution constructed in 1962. The Saṅgha occasionally conducts cultural functions and holds seminars. It is now a registered organization receiving financial assistance from the State Government.

Howrah Saṅgha

Established in 1925 by Prof. Benimadhab Barua at 25/1 Nilmoni Mullick Lane, Howrah, the Howrah Saṅgha amalgamates in itself four earlier organizations, namely Anāth Bandhu Samity, Boys' Training Cottage, Sunrise Dramatic Club and Sādhanā Public Library, founded in 1917, 1920, 1923 and 1924 respectively. The Saṅgha runs a girls' school named Ādarsa Bālikā Vidyālaya and a gymnasium called Bāndhab Sakti Mandir. It also organizes community worship of goddess Durgā and arranges indigenous crafts exhibitions, children's literary circles etc. The Saṅgha has a building of its own besides another for the school. It runs a band party and a volunteer crops and organizes from time to time annual outings of its members, various competitions, dramatic performances etc. The institution also supplies food and clothing to distressed families of the locality.

Rāmkrishnapur Byāyām Samity

Rāmkrishnapur Byāyām Samity, one of the biggest organizations of its kind in the district, was established in 1927 at 181 Ramkrishnapur Lane, Howrah. Although primarily a physical culture institution, it also runs a public library and a hand-written magazine besides sponsoring scouting and *Bratachāri* activities. It also organizes

community worship of Durgā and Saraswati and football, basketball, badminton, road race, recitation and essay competitions. The Samity has a playground of its own. Aiding distressed people also forms a part of its activities. The institution is now administered by a registered Trust created in 1962.

Howrah North Club

Howrah North Club, another important social service organization of the district, was established in 1928 at 24 Suburban Park Road, Howrah. In April 1967, its total membership was 250. As a cultural organization, it arranges from time to time birth anniversaries of illustrious Bengalis. It also sponsors sports, music and drama for which there are different sections. The most notable achievement of the Club has been the establishment of the 'Rabindra Sadan' which was opened on January 26, 1967. It has a revolving theatrical stage and an auditorium which can accommodate 700 persons. The 'Rabindra Sadan' also houses a library, a canteen, a reception room and a rest room. The institution has so far received a grant of Rs. 1,87,000 from the Central and the State Governments for its various activities.

The Rāmkrishnapur Defence Party & Sakti Bāhini

The Rāmkrishnapur Defence Party and Sakti Bāhini was founded in the Ramkrishnapur locality of Howrah town in 1928 when it was known as the Rāmkrishnapur Defence Party. In 1940, another local physical culture club, the Sakti Bāhini, merged with it to give it its present name. The organization functions mainly as a vigilance party but also sponsors physical culture, sports and games and dramatic performances. It also runs a small library. The volunteers of the organization doing night patrol duties have been rewarded time and again for their good work by the Police authorities of the district.

Bālak Saṅgha

The Bālak Saṅgha, a registered organization, was established in 1931 at 76 Kasundia Road, Santragachhi, Howrah with the object of promoting physical culture and intellectual pursuits among the people of the locality. It sponsors various indoor and outdoor games, runs a physical culture competition in the district, and conducts the Priyanath Challenge Shield Tournament. It has also a primary school (founded in 1944), a library, a children's forum and a social service wing. The Saṅgha also organizes medical and financial help to the distressed people of the locality. In the night school run by it poor boys and girls of the neighbourhood get free tuition. The club also organizes occasional seminars, dramatic performances and birthday celebrations of illustrious persons. It runs a hand-written magazine named the '*Ushā*'. The institution receives occasional grants-in-aid from the Howrah Municipality, the Health Department of the State Government, the Central Social Welfare Board and the State Sports Association.

Bantra Byāyām Saṅgha

The Bantra Byāyām Saṅgha of 19 Sarada Chatterjee Lane was founded in 1935 for promoting sports and games and physical culture among the youth and children of the locality. Since 1947 it has been

conducting a social training camp once a year. The Saṅgha has its own gymnasium constructed with financial aid from the State Government. It is affiliated to the Jātiya Kriḍā O Sakti Saṅgha and other organizations at the district and the State level. At present it runs a public library with a free reading room, a free night school, a first-aid centre, a gymnasium, a children's sports and hobby centre, a women's craft centre and a primary school for boys and girls. In April 1967 its membership was 330.

Salkia Tarun Dal

Salkia Tarun Dal of 19 Salkia School Road, Salkia, Howrah was established in 1936 as a local football team. It has grown considerably with the passage of time and its present activities are confined to the running of (1) a free primary night school with a roll strength of about 300 students; (2) a charitable dispensary attending to about 100 patients, on an average, per day; (3) a children's health clinic where 50 children, on an average, are medically examined every week; (4) a gymnasium where young men are trained in physical culture under qualified instructors; (5) a library and a free reading room largely utilized by the people of the locality; (6) a Class I ration shop which serves more than 5,700 units per week; (7) a primary consumers' store run for the benefit of the members as also the local people, and (8) an ambulance division affiliated to the St. John Ambulance Brigade. The Dal also engages itself in vaccination and slum clearance work and organizes relief work from time to time for people in distress. It also arranges competitions in road race, physical feats, recitations etc. It is one of the biggest social service organizations in the district with a membership of about 700 at present.

Mahiāri Bāndhab Samity

The Mahiāri Bāndhab Samity was established in 1938 at the village of Mahiari in P.S. Domjur to promote socio-cultural activities in the locality. It observes the birth anniverseries of illustrious persons and organizes community worship of goddess Durgā. It maintains a devotional music troupe named *Kāli-kirtan Dal* and arranges from time to time dramatic performances on religious themes. Besides a vigilance party maintained by it, the Samity also sponsors many indoor games. On occasions, the institution has helped the victims of natural calamities with money and materials.

Howrah Homes

The Howrah Homes, a registered organization, was founded on June 10, 1945, at Santragachhi, Howrah, with the object of qualifying its inmates to earn their own living and thereby become useful members of the society. With this noble ideal always in view, the organization has been sheltering over the years eligible people and turning them into self-reliant citizens.

The institution was originally started on a 20-*bighā* plot of land but its present campus covers nearly 100 *bighās* in which there are three two-storeyed buildings, namely (1) Subodh Niketan, (2) Saramā Kuṭir and (3) Rāghabendra Sadan and a factory named

Syamaprasad Hall. A Siva temple dedicated to Kedāreswar stands on the grounds where there is a tank called Mandākini Sarobar opened in 1957. The day to day affairs of the institution are managed by an elected executive committee with the District Magistrate of Howrah as its *ex-officio* President.

At its initial stage the Howrah Homes started with classes on (*a*) handloom weaving, (*b*) dyeing, (*c*) tailoring and (*d*) carpentry. Later on, hand composing and printing were introduced in 1949 and manufacturing of suitcases and leather goods in 1951. An industrial training centre was started in May, 1950. The foundation stone of the International Cultural Centre and Library was laid in 1958 while the Syamaprasad Hall was inaugurated in 1961. The Government of West Bengal took over the management of the Industrial Training centre (Howrah Homes I.T.I.) on August 19, 1956, on a 99-year lease with effect from January 1, 1957. The students of the Howrah Homes I.T.I. are now trained in about 60 trades of technical and non-technical nature. The women's section of the Homes was transferred to the Government of West Bengal on June 17, 1967.[1]

Howrah District Weight-lifters' and Body-builders' Association

Howrah District Weightlifters' and Bodybuilders' Association of 37 Rajballav Saha Lane, Howrah was inaugurated in 1939 with Rāmkrishnapur Byāyām Sāmity, Young Men's League and Sakti Bāhini as its affiliated units. Since its inception, the association has consistently promoted the cult of bodybuilding and weightlifting among the youths of the district and has, for that purpose, organized lectures, demonstrations and regular training classes. Its representatives have successfully participated in many of the All-Bengal and All-India weightlifting and bodybuilding contests. Lakshmikanta Das, a member of this association, represented India in weightlifting in two consecutive Olympics in Rome and Tokyo held in 1960 and 1964. He was the recipient of the 'Arjuna Award' given by the Government of India to the foremost athletes of the year. The competitions sponsored by the association are: (1) Howrah district junior weightlifting, (2) Howrah district senior weightlifting, (3) Howrah district 'Kishore Sree' best physique contest, (4) 'Howrah Sree' best physique contest and (5) 'Howrah Bidyārthi Sree' best physique contest. Besides the units mentioned earlier, Howrah Tarun Samity, Howrah Annapurnā Byāyām Samity and Salkia Tarun Dal are also affiliated to this organization.

Deshagourab Sevā Ô Satkār Samity

Deshagourab Sevā Ô Satkār Samity of 16/1 Siddheswaritala Lane, Ramkrishnapur, Howrah came into existence in January 1940 for nursing the sick, arranging free education for the poor, collecting rice from door to door for distributing it (as also powdered milk) to the indigent and disposal of dead bodies. It also runs a library and a charitable dispensary and organizes sports and

[1] A detailed description of the educational activities of the Howrah Homes has been given in Chapter XIII on Education.

games. The Samity moved into its own two-storyed building in November 1962.

Mātri Samity

Mātri Samity of 102/1 Kasundia Road, Howrah was founded in 1941 under the name Sevikā Samity. It started with a first-aid training centre and a sports and games wing for the local girls. In 1951, it assumed its present name and now runs a nursery school for children aged 6 months to 7 years; a primary school, named Nepal Chandra Primary School, for children between 6 and 11 years as also a secondary school. The Sasimukhi Silpa Bibhāg managed by it teaches cutting and tailoring to women. Its other activities include the running of a primary school for aged women, a library, a first-aid and home-nursing training centre, dance and music classes, the "Brajendra Saṁskritik Kendra" (for women and girls) and the Bināpāni Co-operative Stores. Annual excursions and cultural competitions are also organized by the Samity from time to time. It is affiliated to the West Bengal Social Welfare Board and receives financial aid from that body and the Howrah Municipality.

Ānanda Sammilani

Ānanda Sammilani of 43 Chandra Kumar Banerji Lane, Sibpur, Howrah was founded in 1942 as a theatrical club. A small library was added to it in January 1957. Later in the same year a free evening school was inaugurated and a wall-newspaper, entitled *Ālpanā*, was brought out which is still being published. A milk distribution centre was opened in February 1958 for the poor children of the locality who are also medically examined from time to time at the instance of the Sammilani. There is besides a well-organized first-aid centre which also organizes vaccination and inoculation campaigns against cholera and smallpox. Other activities of the institution are exhibition of films on health, education etc. and observance of the birth and death anniversaries of eminent men.

Casual Adult Male Vagrants' Home

In October 1943, a Casual Adult Male Vagrants' Home was established at Andul Road, Sibpur under the Bengal Vagrants' Act of 1943. A similar institution, previously located at Golapbag of Burdwan town, was merged with it in August 1960. Adult male vagrants of 18 years and above are sheltered here and provided with vocational training in handloom weaving, blacksmithy, carpentry, book binding, pottery, tailoring, laundering, hair-dressing and gardening. On completion of the training, willing vagrants are encouraged to go out to earn their living, the institution taking other necessary steps for their satisfactory rehabilitation. The inmates of the Home produce bed-covers, bed-sheets, towels, wooden and clay models and potteries and tailored garments which are sold on the market.

Bāni Mandir

Bāni Mandir of Amta was established in 1946. Primarily a physical culture organization, it also sponsors various sports and games, arranges occasional debates, seminars, competitions in essay-writing, recitation, music etc. and runs a library. It also publishes a printed magazine named *Bāni*.

Saṁgrāmi Dal

Saṁgrāmi Dal of 3/3 Sreebash Dutta Lane, Howrah was founded in 1946. It runs a library and a free reading-room (since 1952) and maintains a fire fighting centre under the supervision of the civil defence authorities of the district. On the eve of winter every year it distributes blankets to the needy. Books and financial help are also given to poor students of the locality. It also conducts debates, study-circles, dramatic performances etc. and provides facilities for various indoor and outdoor games. Its cricket team was twice the champion and once the runners-up in the district cricket competition. It is affiliated to the Howrah District Youth Welfare Council.

Sibpur Tarun Byāyām Samity

Started in 1947 the Sibpur Tarun Byāyām Samity of Sibpur now runs a school and a night school for imparting education to the boys and girls of the locality. Its well-equipped gymnasium trains physical culturists of both sexes. The Samity convenes literary conferences from time to time.

Bināpāni Saṅgha

Bināpāni Saṅgha of village Bamunpara (P.S. Jagatballavpur) was established in 1947 for the welfare of the youth of the locality. It sponsors physical culture, rifle shooting, indoor and outdoor games and conducts various competitions, religious festivals, seminars, dramatic performances and other cultural activities.

Kanpur Sevā Saṅgha

Kanpur Sevā Saṅgha of village Kanpur (P.S. Amta) was established in 1951. It has its own building and runs a library and a recreation centre with facilities for indoor games. It imparts social education in the neighbourhood and takes part in road construction, public health measures and relief works. In April 1967, the Saṅgha had a membership of 288.

Bargachhia Union Annadā Pāṭhāgār

The Union Annadā Pāṭhāgār of Bargachhia (P.S. Jagatballavpur) was founded in 1951. Besides running a library, the other activities of the organization include various social welfare work and the staging of dramatic performances. In collaboration with the Indian Red Cross Society and the Ramakrishna Mission Jana Sikshā Mandir of Belur Math it distributes free about 540 lbs. of milk per month to some 200 children and patients of the neighbourhood. It started a night school in 1964. It also sponsors sports and games and brings out a hand-written quarterly magazine named *Kheyā*.

Gandhi Smārak Nidhi

A centre of the Gandhi Smārak Nidhi was opened in 1953 in the village of Durgapur in Amta police station for rural development work. In 1955 three benevolent ladies of the village donated a plot of land on which a mud-and-thatch hut was constructed. Between 1953 and 1966 the Nidhi set up in the village a service co-operative, a *dharmagolā* (community granary) and an adult school as part of its intensive area programme. In pursuance of its extensive area programme, it strove for better irrigation, introduction of improved methods of cultivation, distribution of land to landless cultivators, amicable settlement of disputes etc. During the 1960 floods, the Nidhi came forward to help the local peasantry in various ways. In 1961,

it organized a *Mahilā Samity*, a library, a study-centre and a charitable dispensary. The Nidhi also sponsors bee-keeping, *khādi*-spinning, poultry farming and paddy husking. Its *dharmagolā* has a membership of 155 who take loans of paddy from the garnered stocks at the time of sowing. The Durgapur Samabāya Krishi Unnayan Samity, a co-operative society set up by the Nidhi, has about 100 members and an annual turn-over of Rs. 12,000 approximately. The Nidhi has also set up a *buniādi* (basic) school in the village with an attached park for children and an adjudication board for settling disputes which would have otherwise gone to the courts.

Jagachha Mahilā Samity

The Mahilā Samity of Jagachha (an important village in the police station of the same name) was started in 1953 with classes in needlework and several crafts. It now runs diploma courses in tailoring and embroidery and also maintains a small library. With the assistance of the District Social Education Board an adult training centre with two teachers was opened in 1953. The trainees earn as they learn since the products turned out by them as apprentices find a ready market. The Samity receives a grant-in-aid from the Social Welfare Board.

Sarojini Silpa Mandir

Sarojini Silpa Mandir of 57 Baksara Road, Howrah was established in 1959 as a crafts training centre for women and was recognized by the Directorate of Industries, West Bengal in 1960. It had 30 trainees on its rolls when it started; the present roll strength is 200. Classes are held in needlework, tailoring, toy making, leather-work and machine embroidery. The institution also runs an adult education centre for students belonging to the scheduled castes and scheduled tribes each of whom receives a Government stipend of Rs. 25 per month.

Ānanda Niketan Society

The Ānanda Niketan Society of village Nabasan in P.S. Bagnan on the Calcutta-Bombay National Highway No. 6 is an organization engaged in social welfare, especially of the members of the scheduled castes, through educational, vocational and health programmes. It came into existence in 1960 through the endeavours of a band of young men whose dedication to the cause prompted local men to render aid through voluntary labour or cash contributions. Ānanda Niketan Sevā Sadan, a charitable dispensary run by the Society, was the first service institution to be opened on September 30, 1960. Two medical graduates, who accept no honoraria, attend to the patients with the help of a stipendiary compounder. The maternity and child welfare centre attached to the dispensary renders ante-natal and post-natal medical assistance to local women and attend to children's ailments. In 1965-66 the Tribal Welfare Department, the Social Welfare Board and the Department of Health made a total grant of Rs. 5,112 to this institution.

The Ānanda Niketan Siban Sikshā Kendra imparts training in tailoring to 16 entrants per year and the Ānanda Niketan Bayan

Sikshā Kendra trains 16 new entrants each year in handloom weaving. Most of the trainees are scheduled caste women of the locality. In 1965-66 these two centres together received a total grant-in-aid of Rs. 4,816 from the Tribal Welfare Department of the Government of West Bengal.

The Ānanda Niketan Vidyā Mandir was started as a Primary school in December 1960. In 1961 it was upgraded into a Junior High school. It was, however, split up into a Junior Basic and a Senior Basic school in 1965, the former receiving from the Directorate of Public Instruction, West Bengal a recurrent grant of Rs. 8,285 and an *ad hoc* building grant of Rs. 5,606 and the latter a grant of Rs. 9,309 during 1965-66.

The Ānanda Niketan Samāj Sikshā Kendra engaged in promoting literacy and education mainly among scheduled caste males and females functions within the social education programme of the Government of West Bengal. In 1965-66 it received a grant of Rs. 2,336 from the Tribal Welfare Department of the State Government.[1]

Samāj Kalyān Kendra, Makardaha

Samāj Kalyān Kendra of Makardaha (P.S. Domjur) was inaugurated in 1961 under the auspices of the West Bengal Social Welfare Board. It maintains a maternity home, named *Mātrimaṅgal*, a crafts centre for women and a children's section. The maternity home being the only of its kind in the neighbourhood serves a very useful purpose. In the crafts centre, 30 girl students from very poor families get training in various trades.

Saṅkharōl

Saṅkharōl, a social welfare organization of Sankrail (P.S. Sankrail), was started with a magazine of the same name in 1962. Later, it opened a library which has now a reading room and about 800 books. The institution organized a local division of the St. John's Ambulance Brigade in 1966. In 1967 it set up a text-book library to serve the needs of local school and college students.

Rajganj Mahilā Samity

Rajganj Mahilā Samity of Rajganj (P.S. Sankrail) was founded in 1964. Primarily a socio-educational institution, it runs a crafts training class for distressed women of the locality, a tailoring school, an adult social-education centre for women, a music school for girls and a children centre. Products of the members and trainees are sold in the Calcutta markets.

(Certain other voluntary social service organizations exclusively connected with libraries and literary pursuits have been dealt with in Chapter XIII on Education and Culture.)

LABOUR WELFARE

The operation of various labour welfare legislations has been discussed in the chapter on Industries. Besides such compulsive measures, welfare projects administered by private and public agencies have also been dealt with there.

[1] For information regarding the Ānanda Niketan Kriṣtiśālā museum and Ānanda Niketan Library please see Chapter XIII on Education and Culture.

PROHIBITION

As prohibition has not been introduced in any part of the State, there is no project or personnel in the district exclusively meant for such work. Since December, 1949, all excise and opium shops in the State are compulsorily closed on 4 days in a year, namely the Independence day (15th of August), the birth day of Mahatma Gandhi (2nd of October), the Republic day (26th of January) and the Mahāsṭami day (the second day of the Durgā Puja). Besides, the excise licencees have the option not to transact any business on the occasion of the birth day of Netaji Subhas Chandra Bose (23rd of January), Rathajātrā, Janmāsṭami, Saraswati Puja, Rām Navami, Id-ul-Fitr, Bakr-Id, Fatehā-duāz-dāhām, Muharram, Jagaddhātri Puja and the first day of the Bengali year. There are some restrictions on drawal of toddy from the toddy-producing palms in this district inasmuch as no such tree can be tapped except in vessels which contain sufficient lime or are freshly coated with it internally.

In order to persuade people to keeping away from intoxicants, a scheme is under consideration of the State Government and an officer, designated as Special Officer, Temperance, has been appointed under the Commissioner of Excise to implement it.[1]

A fuller discussion on the incidence of consumption of liquor and its concomitant effects like illicit distillation and displacement of licit liquor by the illicit, can be found in the chapter on Law, Order and Justice.

ADVANCEMENT OF BACKWARD CLASSES AND TRIBES

In O'Malley and Chakravarti's Gazetteer of Howrah (1909), the so-called Scheduled castes were described as "fishing and boating castes" and the so-called Scheduled tribes as "animists". "Hindus", they said, "form the large majority of the people and are divided into numerous castes or semi-Hinduized tribes." Under the category of "fishing and boating castes" they included Kaibarttas, Bagdis, Tiyars, Pods, Kaoras, and under "animists" Oraons and Santals. The Scheduled castes and Scheduled tribes are now elaborately classified under the President of India's Scheduled Castes and Scheduled Tribes Lists (Modification) Order of 1956.

According to the 1961 Census, Scheduled castes and Scheduled tribes in Howrah numbered 2,99,791 and 6,447 respectively, being 14.71% and 0.32% of the total population (20,38,477) of the district. Of them 2,35,485 persons of Scheduled castes and 3,909 persons of Scheduled tribes lived in rural areas and 64,306 persons belonging to the Scheduled castes and 2,202 persons belonging to the Scheduled tribes lived in urban areas. The Scheduled castes are mainly concentrated in Howrah city and Domjur, Amta, Sankrail and Uluberia

[1] Source: Commissioner of Excise, West Bengal.

thanas where they number more than 10,000 apiece while the Scheduled tribes have the largest concentration in Sankrail P.S. with a population of 1,313. The Census report of 1961 classified sixteen Scheduled castes as numerically important, of which Bagdis or Duleys (92,949), Pods or Poundras (38,289), Rajbanshis (36,246), Namasudras (24,530), Kaoras (18,963), Muchis (13,197), Jalia Kaibarttas (12,773) and Dhobas (11,539) are most numerous in Howrah district. There are certain villages in the district which are exclusively populated by members of the Scheduled castes; they are Bhagabatipur (Sankrail P.S.), Syamchak (Panchla P.S.), Kumarpur (Jagatballavpur P.S.), Chak Hari and Chak Kadamtala (Domjur P.S.), Madhubati, Rauta and Dadpur (Uluberia P.S.), Madaribar (Syampur P.S.), Iswaripur (Bagnan P.S.), Chak Kundalia, Kalasdihi, Fatikberia, Sarpai, Chalunia and Mollar Chak (Amta P.S.).

To look after the welfare of these backward people a full-time Tribal Welfare Officer belonging to the Tribal Welfare Directorate of the State Government has been stationed at the district headquarters since July, 1962 under the overall supervision of the District Magistrate. Prior to his posting such ameliorative work used to be attended to by the normal agencies under the District Officer. Voluntary organizations have also been receiving Government grants all along for bettering the lot of these people. A report published by the Tribal Welfare Department in 1960 stated: "Though ten years is not a long period for effecting all-round changes in the life of any community, it can be stated in a general way that, even during this short period, the tribal societies are showing signs of coming out fo their age-old apathy and backwardness." A more heartening note was sounded in the Annual Administration Report of the District Magistrate for the year 1963-64: "Scheduled castes and Scheduled tribes communities suffer from many socio-political and socio-economic drawbacks which are definitely hindrances to the evolution of a modern society. The State patronage and active co-operation and response of Scheduled tribes and Scheduled castes communities are two bold attempts to remove those hindrances—surely a time-consuming process. In the district of Howrah, this process is working as satisfactorily as possible under the limitations of existing circumstances."

The table below gives an indication (which is not exhaustive) of Government assistance relating to tuition fees, book grants, sinking of tube-wells, aid to voluntary organizations for spread of education, removal of untouchability etc. The Scheduled castes and Scheduled tribes in the district are also assisted through minor irrigation schemes, training in vocational trades and crafts, financial assistance to artisans and grants for organizing sports and exhibitions etc.

GOVERNMENT AID IN SELECTED FIELDS TO SCHEDULED CASTES AND SCHEDULED TRIBES IN HOWRAH DISTRICT

(1) Amount spent for tuition fees, book grants etc. at Secondary and post-secondary stages of education

Year	For Scheduled Castes (Rs.)	For Scheduled Tribes (Rs.)	No. of beneficiaries	
			Sch. Castes	Sch. Tribes
1954-55	6,838	54	152	1
1960-61	7,819	318	165	6
1963-64	26,737		650	9
1964-65	65,001		1,661	11
	1,50,214 (Being Government of India scholarship at the post-secondary stage)		364	5
1965-66	85,328		2,662	11
	1,77,743 (Being Government of India scholarship at the post-secondary stage)		366	8

(2) Tube-wells sunk in Scheduled Castes and Scheduled Tribes areas

Year	For Scheduled Castes	For Scheduled Tribes
1955-56	6	3
1960-61	8	—
1962-63	13	1
1963-64	5 (Expenditure cut down for national emergency)	—
1965-66	14	1

(3) Aid to voluntary organizations for welfare activities like spread of adult education, removal of untouchability etc

Year	Name of Organization	Grant (Rs.)
1953-54	Baly Harijan Naisa Vidyālaya	350
1954-55	,, ,,	1,200
1955-56	,, ,,	6,420
1962-63	Ānanda Niketan, Bagnan & Women's Development Society, Howrah	8,840
1964-65	Ānanda Niketan, Bagnan & Baly Samatā Kendra	1,514
1965-66	Ānanda Niketan, Bagnan	10,864

Besides the educational grants mentioned in the preceding table, financial assistance is also given for construction of school buildings, setting up of students' hostels and extension of accommodation in the existing ones. Under one such scheme, a hostel attached to the Jagatpur Adarsha Vidyalaya (P.O. Baniban) was built in 1960-61 for Scheduled caste students at an outlay of Rs. 10,000.

Dealing with the educational advancement of backward classes, the District Magistrate said in his Annual Administration Report: "The spread of modern education has gradually brought about a revolutionary change in social outlook, cultural and social values, customs etc., and to a considerable extent purged society of superstitions and social taboos. Education at different levels has much influenced and conditioned a mental set up for adopting democratic types of political and social institutions. . . . The educational facilities thrown open by State enterprises, have been hailed and availed of without reservation."

The following table gives consolidated figures for schemes operating in the district for providing training in vocational trades and crafts, hostel facilities to such trainees and financial aid to artisans belonging to the Scheduled castes and Scheduled tribes.

Year	Amount spent (Rs.)	Beneficiaries	
		Scheduled Castes	Scheduled Tribes
1962-63	11,980	31	—
1963-64	12,856	50	1 (Amount cut down for national emergency)
1964-65	28,951	131	—
1965-66	42,068	176	—

Lump grants are also made to clubs, libraries etc. meant for these people. The table below gives consolidated figures in this behalf.

Year	No. of institutions	Grant (Rs.)	Remarks
1962-63	14	1,250	
1963-64	—	—	Suspended owing to national emergency
1964-65	25	3,000	
1965-66	36	3,000	

To quote again from the Annual Administration Report of the District Officer for 1962-63: "The general condition of tribal people belonging to 'Oraon' and 'Munda' communities, mostly living in

urban and semi-urban areas, is rather a bit better than most of the 'Bhumij' community living in rural areas. Their better condition is due to the fact that these tribal people are mostly employed in mills and factories of different types and they are living in urban and semi-urban areas. Most of them have either come from Bihar or other States for different jobs."

As regards the voluntary organizations engaged in the welfare of Scheduled castes and Scheduled tribes in the district, special mention may be made of 'Aboak Gaonta' (lit. 'Our Organization'), an institution of the Santals who have migrated to the district from Burdwan, Midnapur, Bankura and Purulia. It started functioning in 1953 and has at present a membership of 74. Its registered office is located at 49, Tikiapara Road, Salkia, Howrah, and its objects, as contained in the Memorandum and Articles of Association are as follows: "...to undertake activities for the advancement of the tribals so that they may take their legitimate status in the national life of India as equal citizens; to carry on all kinds of social service work in areas inhabited by tribals; to promote social and cultural interests of tribals; to hold cultural performances so as to develop better understanding of the themes of tribal culture by the general population of the country; to establish a tribal centre at Calcutta where a library and reading room along with other equipments of cultural and educational interests will be maintained for use by the members of the Society as also by the general public; to recognize and affiliate such local associations, societies or institutions desiring affiliation as have objectives similar to those of this Society and to grant facilities to such affiliated bodies and to cooperate with different agencies engaged in objective study of tribal problems."

Almost all the members of this organization are educated and some of them are graduates. They are mostly employed in various Government offices and some are in private callings.

Although the forces tending to integrate these migrant tribal communities with the local populace are inexorably at work, albeit with a slow momentum, the fact remains that religious or regional affinities are still fairly strong amongst the various tribal groups, as was noted by Shri A. K. Das, Cultural Research Officer in the Tribal Welfare Department of the State Government in course of a study which he undertook between March 1958 and January 1960.[1] To quote his words, "these neo-elites of tribal societies at the time of forming any grouping are still guided to a marked extent by factors like belonging to the same community, having faith in same religion as well as coming from the same district. Factors like educational levels, occupational status and impact of urban life for a considerable period still have not played a significant role in grouping."

[1] A. K. Das—Influence of City Life on Educated Tribals: Bulletin of the Cultural Research Institute, Vol. I, No. 2, Calcutta, 1962.

Ananda Niketan of Bagnan is another notable organization devoted to the welfare of Scheduled castes. According to the Annual Administrative Report of the Tribal Welfare Officer, Howrah for 1962-63. "... the activities of this organization deserve special mention. It is actually rendering yeoman's service for the benefit of the Scheduled caste communities."

CHARITABLE ENDOWMENTS

The traditional methods through which social benefaction found its fulfilment in India were excavation of tanks, construction of temples, roads and rest-houses and establishment of educational institutions, hospitals etc. With the death of the donors, most of them ceased to be looked after properly leading to their decay. To obviate this sad contingency, the munificent rich of the 19th and 20th centuries started creating trust funds and placed their contributions at the disposal of well-chosen trustees who, by virtue of the posts or kinship status held by them, could function in perpetuity to the lasting benefit of the cause for which the original donations were made.

Of the 15 trust funds in operation in Howrah district, 5 relate to health services, 9 are intended to provide educational and cultural facilities and the remaining one is meant for medical aid to students. It will be evident from the table below that most of the endowments originated from small donations made by private persons of ordinary means although a very few of them, like Rameswar Malia, came from the wealthy business community.

TRUST FUNDS IN HOWRAH DISTRICT[1]

Sl. No.	Name of the Trust	Endowed by whom	Year of inception	Amount endowed (in Rs.)	Purpose of endowment
1.	Rameswar Malia Charitable Veterinary Dispensary Fund	Descendants of Rameswar Malia	N.A.	N.A.	For providing verterinary services
2.	Harihar Bhattacharya Trust Fund	Descendants of Harihar Bhattacharya	"	"	For providing a bed in Mahiari Dispensary (P.S. Sankrail)
3.	Krishna Chandra Ghosh Medal Fund	Descendants of K.C. Ghosh	1904	200	For awarding a medal annually to a meritorious student passing the school leaving examination
4.	Nemaichandra Dutta Free Studentship Fund	Descendants of N.C. Dutta	N.A.	400	Annual grant of a free studentship

(contd.)

[1] 'N.A.' means information is not available. Funds at serials 13, 14 and 15 are administered by the Chief Medical Officer of Health. The fund at serial 8 is under the administrative control of the District Inspector of Schools. All other Trust Funds are under the administrative control of the District Magistrate, Howrah.

TRUST FUNDS IN HOWRAH DISTRICT —(*Contd*)

Sl. No.	Name of the Trust	Endowed by whom	Year of inception	Amount endowed (in Rs.)	Purpose of endowment
5.	Duke Public Library Trust Fund	Public donations	N.A.	N.A.	For maintenance of Duke Public Library in Howrah city
6.	Thakurdass Chatterjee Medal Fund	Descendants of Thakurdass Chatterjee	1910	1,000	For annual award of a medal to a meritorious student
7.	Chingrajole Narayani Balika Vidyalaya Fund	N.A.	N.A.	N.A.	For maintenance of Chingrajole Narayani Girls' School
8.	Madhusudan Bose Charitable Dispensary Fund	Nabagopal Bose	1917 or 1918	5,000	For maintenance of Madhusudan Bose Homoeopathic Dispensary at Maju and free treatment of students of R.N. Bose High School, Maju
9.	R. N. Bose H.E. School Fund	N.A.	N.A.	43,700	For maintenance of R. N. Bose High English School, Maju
10.	Howrah District Literary Association Fund	Public donations	,,	N.A.	For promotion of the Association
11.	Madhav Memorial Library Trust Fund	,,	1917	,,	For maintenance of Madhav Memorial Library at Salkia
12.	Girishchandra, Nemaichandra Chatterjee and Mokshada Sundari Debi Scholarship Fund	N.A.	1924	2,800	For scholarships to deserving students
13.	Kanailal Seal Fund	,,	N.A.	1,13,300	For maintenance of beds and other health facilities in Howrah General Hospital
14.	John Tylor Endowment Fund	,,	,,	120 preference shares of Messrs. Burn & Co. Ltd. of face value of Rs. 12,000	ditto
15.	K. K. Dutta & Bros. Endowment Fund	,,	,,	5,200	ditto

CHAPTER XVI

PLACES OF INTEREST

AMRAGARI—A village in Amta police station in Uluberia subdivision, 6 miles (9·6 km.) west of Amta and connected with it by an asphalt road. The village is most conveniently reached from Amta by crossing the adjacent Damodar river and proceeding west from Betai Bandar on the opposite bank from where taxis and buses ply on the metalled road. Except during the rains and autumn, the bed of the river is dry at this point permitting vehicles to cross over to the other side without the aid of ferries. In 1961, the village had a population of 2,034 persons of whom 900 (or 44·2%) were educated and literate. It contains a Post Office, a primary and a high school for girls, a health centre with a maternity wing, a dispensary, a prayer hall for Brahmos and an office of the Junior Land Reforms Officer.

The Nababidhan Brahmo Samaj of this remote village deserves special mention as the Brahmo movement of the late 19th century was mostly a city-bound affair. It was founded by Fakirdas Roy, a scion of the local zemindar family, in 1880. It has its own prayer and assembly hall, a fine building with an imposing tower flanking the main road. Brahmananda Keshab Chandra Sen, the Brahmo leader, visited the place on many occasions. Under the leadership of Fakirdas, the local Brahmos founded a Middle English school, a charitable dispensary and a girls' school in the village. The Jaypur Fakirdas Institution, the Iswar Chandra Hazra Charitable Dispensary and the Menoka Smriti Balika Vidyalaya still recall their pioneering activities.

The Roy family

It is said that the ancestors of the Roy family, unable to bear the persecutions of Murshid Quli Khan, left their original seat at Samrajpur in Murshidabad district and settled here towards the middle of the 18th century and amassed a fortune by trading in coal and bricks. Fakirdas was born in this family in October 1853. At the age of twenty, while taking his collegiate education in Calcutta, he came under the influence of Keshab Chandra Sen and introduced the Brahmo movement in his native village which evoked fierce opposition from the orthodox Hindus of the locality. His saintly character and service to the community, however, drew around him a band of devoted workers with whose help he founded in 1880 in the neighbouring village of Jaypur a Middle English school of which he served as the Headmaster for a long time. It was through his persuasion and influence that Iswar Chandra Hazra, a co-villager, donated Rs. 19,000 towards

the establishment of a charitable dispensary which bears his name. Fakirdas Roy passed away on July 30, 1899. With his demise Brahmoism began to lose its hold on the local people most of whom have since reverted to the orthodox Hindu fold.

Festivals

Rathajātrā or the car festival observed in the month of July and attended by a big fair lasting for 9 days is the principal religious function of the village. *Gājan* festival of Siva and the worship of goddess Kāli are also observed with great *eclat* in the months of March and October-November respectively. Fairs are held on both the occasions lasting for several days. On the second day of the Bengali month of *Baisākh*, another fair called *Pirer Melā* is held around the grounds (*āstānā*) sanctified to the Muslim saint Manik Pir. There are a few temples in the village of which the ones dedicated to Dadhimadhav and Gajalakshmi displays fine terracotta embellishments.

Jaypur

Two miles south of Amragari is Jaypur, a large and prosperous village in Amta police station, connected with the Amta-Jhikira highway by a non-metalled road about 1½ miles (2·4 km.) long and jeepable only in fair weather. In 1961 it had a population of 6,358 persons, mostly Mahishyas, of whom 2,257 (or 35.5%) were educated and literate. Here are located a Higher Secondary school for boys (Jaypur Fakirdas Institution), a High school for girls, 5 Primary schools, a Government sponsored Rural Library, 3 private libraries, a few dramatic clubs, a Health Centre, a Post Office and a daily market.

The Mandals, Rays, Jathis and Pramaniks are important families of the village. It is said that the Mandals settled here first a few hundred years ago and then brought the other families and gave them land settlements. The former earned their fortune from trade in bricks and salt and were the foremost zemindars of the village. The annual worship of goddess Jaichandi is well-known in the neighbourhood. *Gājan* of Siva, *Hōli*, *Rathajātrā* and worship of goddess Jaichandi are among other important festivals of the village. The Sridhara temple of the Das family (built in A.D. 1701) has fine terracotta decorations.

Jhikira

About 3 miles north-west of Amragari and near the western border of the district lies Jhikira, a village in Amta police station, approachable by the Amta-Jhikira road motorable throughout the year. In 1961, it had a population of 3,596 persons of whom 1,339 (or 37.2%) were educated and literate. The village has a 45-year old *chatuspāthi* (a school in which the four Vedas are taught), a Higher Secondary school founded in 1889, an Upper Primary school, a Primary school, a Basic school, a charitable dispensary, several libraries, dramatic and sports clubs, a Post Office and a daily market which is one of the biggest of its kind in the district handling large quantities of cereals, vegetables and fish. Two important local social service organizations

are the 50-year old Jhikira Social Service League and the Ramakrishna-Vivekananda Society.

Temples & festivals

There are many temples in the village some of which have good terracotta decorations on them. The greatest veneration is paid by the villagers to the goddess Jaychandi, supposed to be the oldest existing deity of the place, whose wooden image is enshrined in a brick-built *āṭchālā* temple in the Sarkhelpara locality. Legend has it that some 300 years ago, during a great flood, the image came floating to its present site from the village of Jaypur, 6 miles (9.6 km.) to the south-east. A hermit who used to pass his days in meditation at this spot claimed the ownership of the deity which was disputed by a local zeminder named Durbar Khan. The Muslim Fauzdar of the region settled the dispute by ordering that whoever of the two could hold a red hot iron in his hands without sustaining any injury would be declared the rightful owner. This the mendicant did whereupon he was allowed to install the deity in a temple which appears to have been renovated later by the Maharaja of Burdwan who also granted some *debottar* lands to the goddess. The Sarkhels are the hereditary *sebāits* of Jaychandi although the Rays of Jaypur still exercise the right to worship her on the last day of every Bengali month. This practice lends support to the legendary belief that the deity had originally been carried in a flood from Jaypur to Jhikira. The annual festival of *Jaychandi* coincides with the worship of Durga in September-October and is largely attended. A little to the west of the shrine of Jaychandi stands the *nava-ratna* (nine-towered) temple of Garhchandi constructed by the Mahishyas of the village belonging to the *Swayambara* group. The other group of the same caste, called *Maudgalyas*, have their exclusive place of worship named *Sidhwapeeṭh* where goddess Durgā is worshipped in September-October every year. Among other religious celebrations of the village may be mentioned the *Rathajātrā* or car festival performed by the Malliks in July which is attended by a big fair lasting for 9 days and attracting thirty to forty thousand visitors from far and near.

Besides the Sarkhels and the Malliks, the Kolays, the Rays and the Hatis are important local families. The Kolay family has been largely instrumental in the upliftment of the village and it was through its instance that the Jhikira Social Service League was founded about 50 years ago as a branch of the Bengal Social Service League. Among the various activities of this organization, construction of brick-paved roads, running of a charitable dispensary etc. are worthy of mention. Because of the attention paid to social and educational progress by these enlightened families, many inhabitants of Jhikira have qualified themselves over the years to hold important white-collar jobs in Calcutta, Howrah or elsewhere.

Khariop

Khariop, a village in Amta police station 2 miles west of Amta and connected with it by the Amta-Jhikira all weather road on which

taxis and buses ply from Betai Bandar on the western bank of the Damodar opposite Amta. In 1961, it had a population of 2,147 persons of whom 751 (or 34.9%) were educated and literate. The village has 2 Primary schools, a Higher Secondary school for boys and girls, the Block office, a Post Office, a library, dramatic and football clubs, a 200-year old temple of Khargeswar-Siva, another shrine dedicated to Smasān-Kāli and a *hāṭ*, held twice a week on Mondays and Fridays.

The annual worship of Smasān-Kāli in November-December is attended by a big fair lasting for 5 days. It is said that the Basus, erstwhile zemindars of the village, initiated the festival some 200 years ago. Besides, fairs called *Nīler melā* and *Chaḍak melā* are also held on the last day of the Bengali month of *Chaitra* and the first day of *Baisākh*.

The Basu family

All that now remains in the village to remind of the Basus, an illustrious family of local zemindars, is a huge uncared for building consisting of 8 separate apartments and 248 rooms. Balaram Basu, the founder of the family, was the younger brother of Jaganmohan Basu, the then *tahasildār* of Khariop. Balaram amassed a fortune by serving as the *dewān* of indigo traders of Ghatal in Midnapur district and invested his wealth in buying extensive zemindaries. He and his descendants brought many Brahmin families, including the Dirghāṅgis, and settled them here with land grants, erected temples, excavated tanks and established *chatuspāṭhis* for the promotion of Sanskrit learning. The temple of Smasān-Kāli was built by this family and the ancient shrine of Khargeswar Siva was also renovated by them. Many of the present descendants of the family, scattered all over the country in different walks of life, still sojourn to their native village on the occasion of the annual worship of goddess Durga which has been held uninterruptedly at their ancestral home for about 260 years now.

To the rear of the house of the Basus is a small mound yielding bricks which is popularly associated with a Bagdi king named Bhringa or Finge who is said to have ruled here before the Basus came into prominence. The correctness of the common belief that the mound marks the site of the citadel of Finge Raja can only be proved through a regular excavation of the place.

Rautara

Rautara, a small village on the Amta-Jhikira road some 2 miles west of Amragari is noted as the seat of two well-known zemindar families—the Sarkars and the Rays—whose ancestors erected in 1684 and 1622 Saka (A.D. 1726 and 1700) respectively two dated *āṭchālā* temples dedicated to Damodar and Sitaram which display some of the finest terracotta decorations to be seen anywhere in the district.

AMTA—A flourishing non-municipal town and a place of Hindu pilgrimage situated on the left bank of the derelict channel of the

Damodar 48 km. (30 miles) from Howrah city by rail and 42 km. (26 miles) by road. Terminus of the Howrah-Amta section of the Howrah-Amta Light Railway, the place can also be reached from the district headquarters by proceeding up to Ranihati along the Calcutta-Bombay National Highway No. 6 and then turning west to follow the metalled Ranihati-Amta road which involves a ferry crossing of the Rajapur drainage canal at Gabberia. (A road bridge is now under construction at this point). Amta is the headquarters of the police station of the same name and contains the office of Amta Development Block (No. 1), a Post Office, a Sub-Registry office, a Munsif's court and a fine bungalow of the Irrigation Department. In 1961. it had a population of 8,086 persons of whom 3,215 (or 39.8 %) were educated and literate. The place has 6 Primary schools, 3 Multi-purpose Higher Secondary schools, a degree college called Ramsaday College and a library known as Amta Public Library. Situated amidst an extensive betel-leaf and vegetable growing area, Amta is a flourishing centre for the collection and export of these agricultural produce.

It is an old place having found mention in several medieval Bengali texts including the *Chandi Mañgal* of Kavikañkan Mukundaram Chakravarty (c. 1600 A.D.). Although literary evidence testifies to the importance of the place as a centre of Hindu pilgrimage, Amta also flourished as a trading centre up to the middle of the 19th century. It was a busy entrepot for salt brought from Hijli, coal from Raniganj and wood from North Bengal, the Damodar being then a broad highway of commerce, bearing hundreds of cargo boats. A memorial of this time still survives in the name Betai Bandar (i.e. Betai port) by which the place on the opposite bank of the river is called to this day. Important trading families were the Lahas, Addhyas and Sahas of Amta and the Dattas of Hatkhola, Calcutta. With the dereliction of the Damodar, the river-borne commerce languished but the opening of the railway greatly encouraged the export of jute, vegetables and fish to Howrah and Calcutta.

Melāi Chandi

The best known spot of Amta is the shrine of Melāi Chandi, a form of Sakti. Legend has it that her shrine was originally at Jayanti, a place on the other side of the river, about a mile from its present site. It marked one of the 52 *piṭhas* sanctified by receiving portions of the dismembered body of Sati. Here fell her knee-joint (*Mālāi*) leading to the naming of the deity as Melāi Chandi. Previously, the priest, who lived at Amta (as also the votaries) had to cross the river daily to reach the shrine. This caused them great inconvenience, especially when the country was flooded in the rains. An ancestor of the present *sebāits*, therefore, prayed to the goddess to take pity on her worshippers and came to Amta. She appeared to him in a dream and granted his prayer. Next morning her image was found near the present market place where it was kept and worshipped for some

time. The present temple of the deity was built by Krishnachandra Datta of Hatkhola who had salt depots at Amta. Legend has it that several of his salt boats sank in a gale in the Damodar but were providentially restored with the cargo undamaged on his having promised to build a temple for the goddess. The date plaque of the shrine above the entrance is illegible owing to liberal coats of white-wash, but is said to ascribe the erection of the edifice to a Karmakar in 1056 B.S., i.e. A.D. 1649. It is a simple *āṭchālā* structure with a detached *mandapa* hall in the fore-court and a subsidiary shrine of Siva to the south-east, the whole complex being enclosed by a compound wall, the entrance gateway being on the south. The main shrine houses the image of Melāi Chandi flanked by subsidiary stone figures worshipped as Bāsudeva and Kārttika and broadly assignable to the Pāla period. The stone image of Melāi Chandi with a vermillion-painted face stands on a stone pedestal which too can be ascribed to the Pala period.

Fairs and festivals

The deity is held in high religious esteem by the people of the locality. Her temple is thronged by numerous devotees throughout the year while festive occasions are marked by large congregations. The ceremony commemorating the installation of the goddess held on the full moon day in the month of *Baisākh* (April-May) is the most important festival of the place which is attended by a large fair. Another fair takes place on the full moon day of the month of *Māgh* (January-February). Special *pujās* are offered during the annual worship of Durgā when *jātrā* performances and fireworks are organized. The *Chaḍak* festival of Kumudeswar Siva, the consort of Melāi Chandi, held in the Dakshinpara area and the *Dharma-jhāp* held in honour of Dharma in the Bagdpara locality, both occurring at the end of *Chaitra* (March-April), are among other religious celebrations of the place.

Gazipur

Gazipur, a village on the other side of the river about a mile south-west of Amta, is the place of residence of the Sinhas (Mazumdar), a respectable zemindar family of the district. The founder of the house, a high officer under the Nawabs of Bengal, came to live here towards the end of the 17th or the early part of the 18th century. Ramnarayan Sinha, another scion of this family, who had great influence over the then Nawab, is credited with the excavation of a number of tanks in the locality and the construction of several temples, one of which is probably the shrine dedicated to Govinda Deva and built, according to the date plaque above the entrance, in 1714. One of his descendants commissioned in 1775 the erection of the Ramesvara temple, now in ruins.

Mahishmuri

To the south of Gazipur is the village of Mahishmuri where the shrine of Bhubvaneswari, built in A.D. 1679, contains fine specimens of early temple terracotta art.

Narit

The importance of Narit, a village to the south-west of Gazipur,

stems mainly from its having been a renowned seat of Sanskrit learning and the home of the famous Sanskrit scholar Pandit Mahesh Chandra Nyayaratna. The scholastic traditions of the place have been dealt with in Chapter XIII on Education and Culture.

ANDUL—A village in Sankrail police station in Sadar (Howrah) subdivision, situated on the right bank of the old Saraswati river, about 4 miles west of Howrah city and 8 miles from Howrah railway station. It is connected with Andul railway station on the South Eastern Railway by a metalled road 2.4 km. (1½ miles) long. The place can also be reached by bus from the Howrah bus terminus along an asphalt road called Andul High Road. In 1961, it had a population of 4,690 persons of whom 2,502 (or 53.3 %) were educated and literate. Here are located a High school which is more than a hundred years old, a big daily market, a 200-year old temple of Siddheswari, a ruined garden house of the Mallik family called 'Golap Bag', and an old palace of the Andul Raj. The village is famous for its *Kālikeertan* (devotional songs of Kali worship) originated by the late Premik Maharaj, a local inhabitant, whose descendants still live here.

Zemindar families

Andul's importance stems mainly from its being the seat of two illustrious zemindar families, the Malliks and the Mitras. The founder of the former was Gaur Charan Mallik, who settled here during Muslim rule. His grandson, Kasi Nath, was appointed *Diwān* of Cuttack at the time of Lord Cornwallis and acquired landed estates there. He next became the chief *mukhtār* of Maharaja Tejchandra of Burdwan who rewarded his services by the grant of the bulk of Nawāpur *Mahāl* in Howrah district. His son, Jagannath Prasad, left three sons, Jogendranath, Nagendranath and Khagendranath, besides two daughters. Jogendranath built a large garden house called the 'Golap Bag' or rose garden, which may still be seen at Andul in a ruinous condition. He also founded a school here in 1848 which became a High English school in 1857 and was renamed the New Andul H.C.E. School in 1941. Jogendranath died childless in 1884, and his two brothers also left no sons. The property being heavily mortgaged was then sold and bought by Matilal Sil.

Andul Raj

The founder of the Roy family was Diwān Ram Chandra Ray, who, according to the family chronicles, served under Lord Clive and helped him against Siraj-ud-daula. At the instance of Clive, it is said, Emperor Shah Alam conferred on his son, Ram Lochan, the title of Raja in 1765 with a command of 4,000 troops. He started a local era called *Āndulābda* beginning in A.D. 1771 for observance within his estates. Ram Lochan's grandson, Rajnarayan Ray was a liberal patron of Indian music. In 1836, Lord Auckland recognized his title of Raja and bestowed on him a dress of honour with a jewelled sword and dagger. His son Bijay Keshab Ray died childless but permitted his two widows to adopt. Both adopted boys and litigation

ensued, the Privy Council eventually holding the adoptions illegal. The property, heavily burdened with the cost of litigation, was inherited by the daughter's son, Kshetra Krishna Mitra, who died in 1907 leaving two sons, Upendranath and Nagendranath. The remnants of the property are now held by Pramathanath Mitra. The Andul Raj palace, adorned with high columns, is one of the sights of the village. Andul was also a noted centre of Sanskrit learning.[1]

Mahiari

Adjacent to Andul but within the Domjur police station of the Sadar subdivision is the large and prosperous village of Mahiari (popularly termed Mouri) situated on the right bank of the Saraswati river and connected with the Maurigram railway station on the South Eastern Railway by an all-weather metalled road (Andul High Road) and also with Andul by a non-metalled road. The village is closely connected with Andul and may be considered a part of it for all practical purposes. In 1961, it had a population of 7,076 persons of whom 3,116 (or 44%) were educated and literate. It contains two High schools, one for boys and the other for girls, a rural library having a good collection of rare books, two hospitals, a post office, a daily market, a cotton mill and a ruined G. T. S. tower.[2]

Of the several temples in the village erected by the ancestors of the Kundu-Chaudhuris, the foremost local zemindars, those dedicated to Panchananda Siva and Smasaneswar Siva attract the widest veneration. Churamanipara, a part of the village, which derives its name from that of the renowned Sanskrit scholar Churamani Tarkasaraswati, was once an eminent seat of Sanskrit learning having many *tols* and *chatuspāṭhis* there. The eminence of the local scholars is established from the fact that the place was known for long as 'Southern Nabadwip'.

The Kundu-Chaudhuri family

The Kundu-Chaudhuris of Mahiari were originally traders and money-lenders who gradually rose to the status of zemindars. Tekauri Datta, who was the first to settle at the village some 200 years ago, acquired the estate of *parganā* Muzaffarpur and his successors Kedarnath Kundu and Hiraman Kundu combined money-lending with zemindar in the first decade of the present century. Their descendants now live at Mahiari in reduced circumstances. The K.C. Institution, a High school for boys, the local library and the Gurudas Memorial Hall were all founded by the members of this philanthropic zemindar family. On the occasion of the annual *Rās* festival connected with the worship of Lakshmi-Janardan, the family-deity of the Kundu-Chaudhuris, a big fair is held here lasting for 15 days. Other

[1] For details see Chapter XIII.

[2] In 1909, when the old Howrah District Gazetteer (*vide* p. 149) was published, this Great Trigonometrical Tower appears to have been in a much better condition as it was described there as "a high brick tower with five stories, about 165 feet in height, the top of which can be reached by a long series of steps inside. This tower is one of the several erected in the early days of British rule for semaphore signalling before the introduction of the electric telegraph."

religious festivities of the village include the ***Rathajātrā*** (in June-July), the *Snānjātrā* (in June-July) and *Chaḍak* (in April), each attended by a fair attracting large numbers of visitors.

Prasastha

Immediately to the north of Mahiari is the village of Prasastha which was once an important commercial centre of the district. Much of the erstwhile trade is now gone as would appear from the small population of the village which, in 1961, consisted of only 1,051 persons of whom 419 (or 39.8%) were educated and literate. A band of clay-modellers, descended from hereditary *Paṭuās* of the village are now engaged in the craft of fashioning images of gods and goddesses. The old temple of Kāli by the market place is an object of veneration of the local people.

BACHHRI—A large village in Syampur P.S. situated about 6 km. (4 miles) north-north-west of the thana headquarters and connected by a 2-mile long country track with the Bagnan-Syampur asphalt road on which regular bus services ply. In 1961, it had a population of 1,275 persons of whom 479 (or 37.6%) were educated and literate. The place along with the adjacent village of Khajri to the immediate south appears to have been the site of an ancient settlement. The whole area including two prominent mounds called Damdama in Bachhri and Garhpota in Khajri is virtually strewn with bricks and potsherds which testify to the archaeological importance of the spot. Casual diggings in the neighbourhood for excavating tanks and wells have exposed large quantities of sculptures roughly assignable to the Pala period, ancient-looking potteries, ring wells and a brick-paved road running southwards from Bachhri. Some of the antiquities have been preserved in the museum of Sarat Smriti Mandir at Panitras and in a private collection at Mugkalyan, both in Bagnan P.S. But the bulk of the finds appears to have been appropriated by the local residents or destroyed without keeping any record. The Damdama mound is popularly believed to contain the ruins of the parlour of ancient kings of the region while the one at Garhpota is associated with their fort. Two large tanks at Khajri called *Sadar Pukur* and *Jantāl Pukur* are also ascribed to them. Legend has it that the Bachhri-Khajri area was once the capital of Bagdi kings whose fall was caused by the Raja of Tamluk who vanquished them and destroyed their capital city.

Sultanpur

About a mile to the south-south-east of Bachhri is the village of Sultanpur which contains an old *Chārchālā* temple of Khatiyal Siva built in A.D. 1666. Human figures and ornamental designs above its entrance arch present interesting specimens of early temple terracotta art.

BAGNAN—Headquarters of the thana of the same name in Uluberia subdivision situated 46 km. (29 miles) by rail and 56 km. (35 miles)

by road south-west of Howrah city. The South Eastern Railway passes through the place which is also approachable from the district headquarters along the Calcutta-Bombay National Highway No. 6 and a branch road which is also asphalted. According to popular belief, the name of the place is derived from the Bengali word *bāgh*, meaning a tiger, which animal is said to have been plentiful in this area in the past when it was covered with dense forests.[1] In 1961 the village had a population of 2,648 persons of whom 1,072 (or 40.4%) were educated and literate.

The Bagnan Higher Secondary School was founded in 1854 (i.e. prior to the establishment of the University of Calcutta) and received affiliation as a High English school in 1864. There are 2 girls' High schools, viz. the Bagnan Adarsha Balika Vidyalaya and the Bagnan Girls' School. The Bagnan College, which teaches up to the degree standard, was started in 1958. There are also 2 libraries, a post office and a primary health centre here.

Formerly, a number of local Muslim artisans used to manufacture brown handmade paper but this industry has died out owing to the competition of machine-made products. Bagnan is situated at the centre of an area growing large quantities of betel leaves, the cultivation of which provides employment not only to the *Bāruis*, the traditional caste engaged in this kind of plantation, but also to members of higher castes because of its profitable nature.

Of the local festivals, mention may be made of *Rathajātrā* and *Ulṭo-ratha*, held in the month of *Āshāḍh* (July), on the occasion of which a fair is held for 7 days attracting large crowds.

Kalyanpur

Five miles north-west of Bagnan and in the same police station lies the large village of Kalyanpur which is connected with Bagnan by an asphalt road on which regular taxi services ply. The name of the place appears to have been derived from that of the local goddess Kalyanchandi worshipped by a tribe of professional hunters living in the village. There is a Health Centre, a Higher Secondary school and a Post Office here. Of the several temples in the village, the one founded by the Pala family and dedicated to Kali displays life-size *dwārapālakas* (door-keepers), the enormity of which is seldom matched elsewhere in the district. The *navaratna* (nine-towered) temple dedicated to Damodar and standing within the residence of the Palas contains excellent terracotta embellishments. In the precincts of the *āṭchālā* Siva temple in another part of the village, a fair is held at the time of the annual *Gājan* festival in April which is attended by thousands of visitors. The village has a large Muslim population whose object of devotion is the tomb-enclosure of *Baḍa Pir*, a deceased Muslim saint, about whom many legends are current. It is said that the Maharaja of Burdwan, impressed with the saint's

[1] Ananta Som—'*Grāmer Nāmkaraner Hadish*' in the *Prabāsi*, *Agrahāyaṇa*, 1365 B.S., Calcutta.

miraculous powers, bestowed on him landed estates including a large tank which still exists here.

Khalor

About 1½ miles south of Bagnan and in the same police station lies the old village of Khalor which is connected with Bagnan by an asphalt road on which regular bus and taxi services ply. In 1961, it had a population of 3,490 persons of whom 1,763 (50.5%) were educated and literate. Here are located 3 Primary schools, a Higher Secondary school and a library.

In the famous rent roll of Todar Mal referred to in the *Āin-i-Ākbari*, the place appears to have been mentioned as Kharar and as one of the components of *sarkār* Satgaon. The main attraction of the village is the temple of Mahākāli, said to have been built by one Raja Kandarpanarayan, a resident of the village, late in the 16th century. The shrine, now a flat-roofed masonry structure, appears to have been renovated several times and the present image, built of *neem* wood, was installed here in 1295 B.S. (A.D. 1888). Two ancillary temples dedicated to Siva, the consort of Kali, flank the main shrine. Special festivals in honour of Mahākāli are held on the newmoon days in *Bhādra* (August-September) and *Poush* (December-January) as also on the last day of *Chaitra* (April). In a small temple of Dharma nearby are installed several interesting tortoise-shaped emblems of the same deity.

Nabasan

Two miles west of Bagnan and on the Calcutta-Bombay National Highway No. 6 lies the small village of Nabasan inhabited mainly by Scheduled Caste people. The importance of the place stems from the various social welfare organizations started here by the Ananda Niketan Society which include a museum, a social education centre, a Primary school, a Junior High school (all of which have been dealt with in Chapter XIII), a weaving-cum-tailoring school and a charitable dispensary (which have been dealt with in Chapter XV).

BALY—An old and prosperous town in the police station of the same name in Sadar subdivision situated on the western bank of the Bhagirathi 9.6 km. (6 miles) north of Howrah Railway station with which it is connected by road and rail. It is also approachable along the Sealdah-Dankuni section of the Eastern Railway and from the Barrackpore Trunk Road (in the 24-Parganas district) over the Vivekananda Bridge. The town has an area of 4.56 sq. miles and a population of 1,01,159 persons of whom 52.3% are literate and educated. Baly is mainly an industrial town with many big workshops and small factories; 64% of its working population are engaged in manufacturing and household industries. Its industrial character is also reflected in the sex composition of its population, being only 34,858 females against 66,301 males inhabiting the place. Baly municipality, established in 1883, was recently merged with the Howrah Municipal Corporation. The town has a degree college,

12 Higher Secondary schools, 6 High schools, 8 Junior High schools, 85 Primary schools, 6 *tols* and 4 libraries.

The name of the place is evidently derived from the accumulation of sand (*bāli*) deposited by the Bhagirathi. We find it first mentioned in Mukundaram's *Chandimangal* (*c.* 1600). It appears also in Rennell's Atlas (Plates VII and XIX) of 1779-81. Baly was one of the eight places which supplied Bengal with hand-written almanacs before the art of printing was introduced in the country. These were prepared by the local pundits (*āchāryas*) who were held in great respect. It was an important stronghold of Rarhi Brahmins and a noted centre of Sanskrit studies. Writing in 1811, William Ward had observed that it was one of the seven seats of advanced learning in Bengal.[1] In the early 19th century, the place, however, became a den of thieves, robbers and dacoits whose depredations continued until they were checked by the Dacoity Department in the middle of that century. Baly formed a part of the Howrah Municipality until 1882-83, when Baly, Belur, Barrackpore and a part of Ghusuri were formed into a distinct municipality under the name of Baly with an area of about 2 square miles. Late in the 19th century the place began to acquire the complexion of an industrial township with the starting of a sugar factory which was later converted into a paper mill, long known as the Baly Paper Mill (now defunct). The present improvement of the township owes much to its three eminent sons, late Sricharan Mukherji of Bibirdanga, late Bireswar Chatterji of Chaitalpara and late Santiram Banerji of Banerjipara. During the freedom struggle, the place played an important role inasmuch as in 1906 a branch of the famous Anusilan Samity was established here which became the secret retreat of absconding terrorists. Many young men of the locality also courted arrest during the Civil Disobedience Movement of the thirties.

Of the several temples here none can claim any architectural merit. But the shrine of Kalyāneswar Siva, flanking the Grand Trunk Road, is held in high religious esteem as the *lingam* housed in it is supposed to have come up by itself (*sayambhu*) from the bowels of the earth. A largely attended month-long fair is held in the temple precincts every year beginning on the last day of the Bengali month of *Chaitra* (March-April) and ending on the last day of the following month. On the occasion of the *Rās* festival, in *Agrahāyana* (November-December), another fair lasting for 15 days takes place near the *Rāsmancha* founded on the bank of the Bhagirathi by the Dans of Sovabazar, Calcutta.

BAURIA—Headquarters of the thana of the same name in Uluberia subdivision, situated 25 km. (16 miles) by rail and about the same

[1] For details see Chapter XIII on Education and Culture.

distance by road south-west of Howrah city. The South Eastern Railway passes through the place and the Calcutta-Bombay National Highway skirts it at a distance of some 4 miles with which it is connected by a metalled feeder road. "It is an old place, being found in Rennell's Atlas (Plate XIX), while adjoining it on the north was Fort Gloster with some powder mills (Plates VII and XIX)."[1] For all practical purposes, the three contiguous *mouzās* of Bauria, Fort Gloster and Burikhali form the same township and in 1961 their populations were 8,492, 13,785 and 5,703 respectively. The industrial nature of the township is established from the fact that 77.2% of its total population is engaged in manufacturing industry and the bulk of the rest in storage, transport and communications.

The place is noted for its various factories, the foremost among which are the Bauria Cotton Mills, Fort Gloster North Jute Mills, Fort Gloster New Jute Mills and Fort Gloster Cable Factory. The land on which the Bauria Cotton Mills stand had originally belonged to the Dutch but it was subsequently acquired by the United Company of Merchants in England.[2] This cotton mill is said to be the oldest in India having started work in 1817 or 1822.[3] The coir industry of the locality, providing employment to womenfolk and spare-time occupation to agriculturists, is of some economic importance. There is a Government-aided coir production centre at Chackasi in West Bauria which specializes in making door-mats and other coir items.

Although the total population of the three *mouzās* of Bauria, Fort Gloster and Burikhali is in the neighbourhood of 28.000, they form only a non-municipal town having 2 Primary schools, a Junior Basic school, 2 Senior Basic schools and a Higher Secondary school named the Burikhali K. M. Institution. The literacy rate of the township is also low being only 37.4%.

During the annual worship of goddess Durga in September-October, a big fair is held in the Fort Gloster area which lasts for a month with a daily average attendance of about 5,000 persons.

BELUR—A small township in the Baly police station of the Sadar subdivision, situated on the right bank of the Bhagirathi some 4 miles north of Howrah city with which it is connected by road and rail. Many industrial units are located here, the foremost of which have been dealt with in Chapter V. The importance of the place, however, lies in its being the headquarters of the Ramakrishna Math and Mission, a brief account of which is given in the Appendix.

BHOTBAGAN—See Howrah City.

DASNAGAR—See Howrah City.

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[1] O'Malley and Chakravarti—op. cit. p. 152.
[2] History of Bowreah Cotton Mills (Souvenir) by G. R. Ayer, 1960.
[3] O'Malley and Chakravarti—ibid., op. cit.

DIHI-BHURSUT—Northernmost village of the district in Uday Narayanpur P.S. on the west bank of the derelict channel of the Damodar situated about 5 km. (3 miles) north of the thana headquarters with which it is connected by a non-metalled road jeepable in the fair weather. In 1961, it had a population of 1,911 persons of whom 514 (or 26.9%) were educated and literate. Here are located two Primary schools, a post office and a rural health centre.

History

Bhursut (*Bhurisrestha* of the Sanskrit texts), was an ancient centre of Sanskrit learning, its antiquity dating back to the Pala period. The most notable scholar of the place was Sridharacharyya, the renowned philosopher and author of *Nyāyakandali*, considered as one of the greatest treatises in *Nyāya*. An account of his life and works and the eminence of Bhursut as a centre of Sanskrit studies have been given in Chapter XIII. Bhursut continued to be a place of importance in the medieval period, the local principality ruled by the Brahmin Rajas being known after the place while it gave its name to a *Parganā*. It was also raised to the status of a *Dihi*. Political history of Bhursut has been discussed in Chapter II as also in the article on Garh Bhabanipur in the present chapter.

Up to the second decade of the present century Bhursut was a centre of trade and commerce and an inland port on the Damodar, then a mighty river, providing the facility of an excellent navigable waterway. It was also well-known for its tobacco plantations, manufacture of tobacco and silk thread which were exported in large quantities through the port. Paddy, molasses (*gur*) and brass and bell-metal utensils brought down from Ghatal were other major articles of export. Prosperity of the port and the mart started declining with the dereliction of the Damodar. Bhursut is now an insignificant village, its leading traders, the Mahishyas and the Tambulivaniks, being reduced to humble circumstances.

There are no monuments at Bhursut today to testify to its glorious past. Occasional diggings, however, have revealed the remnants of a brick-paved road, two ring wells and a brick basement of a house at the Madhyapara locality and a terracotta pipe in the Sorpo cremation ground of the village.

Gājan of Bura Siva in Madhyapara is the principal festival of the place. It continues for five days and is attended by a two-day long fair. The worship of goddess Kali in the month of *Jyaishtha* (May-June) is another important religious observance the peculiarity of which lies in the fact that the modelling of the image, its worship and immersion are all performed within a single night. A fair also takes place on this occasion.

Asanda

Adjoining the south-western border of Bhursut lies the village of Asanda noted for its *navaratna* Sridhara temple, built by the local Das family in A.D. 1789, which bears excellent terracotta decorations on its facade.

Uday Narayanpur

Uday Narayanpur contains the thana headquarters, the local Block Development office and a Higher Secondary school. The place is believed to have been named after Raja Uday Narayan of the Brahmin Raj family of Bhursut.

FORT MORNINGTON POINT—See Gadiara.

GADIARA—A village in the extreme south-east of the district in Syampur thana, close to the confluence of the Bhagirathi and the Rupnarayan situated about 8 km. (5 miles) south-south-east of the thana headquarters. The place can be reached from Bagnan railway station by proceeding up to Sibganj along an asphalt road (on which bus services ply) and then turning south to follow a 4-mile long non-metalled road along the western embankment of the Bhagirathi. Commanding a magnificent view of the two mighty rivers, Gadiara has ferry connexions with Nurpur (in 24-Parganas district) on the east bank of the Bhagirathi and Geonkhali (in Midnapore district) on the west bank of the Rupnarayan. In 1961, the village had a population of 659 persons of whom 204 (or 31 %) were educated and literate. The village has a solitary Primary school and a rice mill.

The main attraction of the place is provided by the ruins of a fort called Fort Mornington Point said to have been built by Lord Clive to guard the entrance of vessels up either of the rivers. The fort was later abandoned and fell to ruins but recent erosion of the banks following the great flood of 1942 has exposed huge masonry fragments lying partly buried in the thick silt of the river bed. Starting from the west one comes across a masonry channel from the western wall of which projects a brick-built arched tunnel. In front of the channel there are four stunted brick walls parallelly placed from the north to the south which in their turn are confronted by a double line of ruins of another brick structure. The eastern extremity of the remains is formed by a dilapidated rectangular hall the plan of which can still be made out from its vestiges.

Sibganj

Sibganj, a village 6½ km. (4 miles) to the north of Gadiara and terminus of the Bagnan-Sibganj bus route, was formerly an inland port of some importance. The many rice mills operating in the southern part of Syampur thana used to bring paddy from Midnapore and 24-Parganas and send their product through this place. The recent decline in rice milling industry has reduced the importance of this inland port to a great extent although it still continues to be a centre of riverborne traffic patronized by the small traders of southern Syampur.

GARH BHABANIPUR—An old settlement and the former seat of the Bhursut Raj, Garh Bhabanipur is now a small village in Uday Narayanpur P.S. 8 km. (5 miles) south of the thana headquarters

with which it is connected by a non-metalled road jeepable in fair weather. The village can also be reached from Amta along a country road proceeding north. In 1961 it had a population of 653 persons of whom 180 (or 27.7%) were educated and literate. Here are located a Higher Secondary school for boys, a Primary school, a rural health centre, a dispensary, a library and a daily market.

Bhursut Raj family

Garh Bhabanipur rose to prominence with the assumption of power by the Brahmin Raj family of Bhursut[1] in the middle of the 16th century and continued to be the headquarters of the Raj till the second decade of the 18th century. The founder of the family was one Chaturanan Mahaneogi (Mahaneuki) who, towards the middle of the 16th century, defeated Sani Bhangar, the Dhubar (fisherman), or according to a different version, Bagdi king of the region who had his capital at Dilakas now in Hooghly district. Chaturanan transferred the seat of administration from Dilakas to Garh Bhabanipur, his place of residence. He was succeeded by Krishna Ray, son of his daughter, while Srimanta Narayan Ray, brother of Krishna Ray received a portion of the property and settled at Penro 4 miles east of Garh Bhabanipur. Nothing more is known about Krishna Ray except that he made certain land grants in 1583-84. He was succeeded in Garh Bhabanipur by Darpa Narayan (Dakshin Ray according to another version) while his younger son Mukut Ray received a small share of the property and took up his abode at Dogachhia (now in Hooghly district) which thus became the place of residence of his descendants.

Pratap Narayan Ray, who appears to have ruled from 1652 to 1684, was the great grandson of Krishna Ray and the most illustrious scion of the Garh Bhabanipur house. He made liberal grants of rent-free lands and was a patron of learning. Bharat Mallik, the reputed author of *Chandraprabhā* (A.D. 1675) and *Ratnaprabhā*, was the court poet of Pratap Narayan whom he has named in the preface of his works as his patron. Successors of Pratap Narayan ruled the principality till 1712 when, during the reign of Nara Narayan or immediately after his death, Raja Kirtichand of Burdwan occupied his territory, looted the palace and treasury and carried away the family deities of the Bhursut Raj to Burdwan. The vanquished family then left Garh Bhabanipur, Lakshmi Narayan Ray taking up his residence at Basantapur near Penro while his brother received the patronage of the Raja of Bansberia who provided him with rent-free lands. It is widely believed that the famous iconoclast Kalapahar belonged to this family while the valiant queen Bhabasan-

[1] Dineshchandra Bhattacharyya after examining a host of primary evidence has compiled an authentic account of the history of the Brahmin Raj family of Bhursut. The present account of the family is entirely based on the results of his researches contained in the following articles: Dineshchandra Bhattacharyya—(1) *Bhursuter Brāhman Rājbansa* in *Prabāsi*, *Bhādra*, 1359 B.S. and (2) *Rāi Bāghini O Kālāpāhār* in *Prabāsi*, *Poush*, 1361 B.S.

kari, popularly known as Raibaghini, was the wife of Rudra Narayan, said to have been a member of this house. These beliefs are, how ever, strongly disputed by eminent scholars including Dineshchandra Bhattacharya.

Although Garh Bhabanipur had been the seat of the Bhursut Raj for more than a century and a half from the middle of the 16th to the second decade of the 18th century, there is nothing at present to indicate the past prosperity of the place except two temples one of which is in a ruinous state and abandoned, several old tanks and vestiges of a fort in the eastern part of the village. The fort is said to have encompassed about 300 *bighās* of land on which stood the palaces, temples and other establishments of the Raj. To the north-east of the enclosed area is the ruined temple of Gopinath, originally a double storeyed structure housing a number of deities. According to a sketch in a *taidād* preserved in the Hooghly Collectorate, the images of Ganesa, Indrani, Abhaya, Simhavahini, Durga, Bhairavi, Bhuvanesvari and Gajalakshmi were installed in chambers in the ground floor while the rooms of the upper storey contained two Sivas Gangadhara and Kasinatha besides the images of Gopal, Gopinath, Damodara and Radhika. The same document informs us that the images were installed by Raja Pratap Narayan (1652-1684) and his grandson Nara Narayan (1685-1711) from which it may be assumed that the temple was built by the former.

About a furlong to the south-west is the *āṭchālā* shrine of Maninath Siva, the most important temple in the village. According to the date plaque on the facade, the structure was built by Dev Narayan of the Bhursut Raj in 1306 Sakabda (A.D. 1384). Dineshchandra Bhattacharya in the first of the two articles referred to above, has established beyond doubt that this date is absolutely incorrect; his finding on the basis of documentary evidence that the actual date was 1606 Sakabda (A.D. 1684) appears to be well grounded. The entire area between the rampart on the east, the temple of Maninath on the west and the ruined temple of Gopinath on the north is strewn with broken bricks indicating the one-time existence of large structures here.

The *Dasanāmi* Saiva Math of Garh Bhabanipur centred round the temple of Maninath and appears to have been established by one Maninath Giri, a *Dasanāmi* Saiva sannyasi who received rent-free land grants from the Bhursut Raj in 1685 for the services he rendered to the deity. The Math was subordinate to the one at Tarakeswar, the chief centre of the *Dasanāmi* Saivas in Bengal. It is said that Maninath Giri was followed by eight *mohāntas* presiding over the Math in succession. Paresh Giri, the last of them, had to quit his office on a charge of malpractices. The Math is now run by a committee approved by the government.

Singti

Three miles north of Garh Bhabanipur is the village of Singti where

a temple of Sitala at Samantapara and another of Lakshmi-Janardan at Berapara contain fine terracotta decorations on the facades.

HOWRAH CITY—Headquarters of the district (from which the latter takes its name), situated on the west bank of the Bhagirathi in 22°35′ N. latitude and 88°21′ E. longitude and connected with Calcutta by the famous cantilever bridge, now known as the Rabindra Setu. It was constituted a municipality on January 17, 1884 with an area of about 8½ sq. miles nearly 6 miles long and 1½ to 2½ miles in width. The city had an area of 11.13 sq. miles covering the police stations of Howrah, Bantra, Malipanchghara, Golabari and parts of Sibpur and Baly just before the two contiguous municipalities of Howrah and Baly along with other urbanized non-municipal areas were merged into the Howrah Municipal Corporation under an official notification dated July 24, 1965 issued under West Bengal Act XVII of 1965 (the Howrah Municipal Act, 1965). The Corporation has an area of 24.17 sq. miles consisting of Howrah, Baly (urban parts), Malipanchghara, Golabari, Bantra, Jagachha and urban parts of Sibpur police stations.

The earliest known part of the town is Betor lying in the southern part of the city within the jurisdiction of Sibpur police station. The first mention of the place is found in a land grant of the Sena period.[1] A reference to Betor (as also to Ghusuri, another part of the town) is found in the *Manasāmangal* of Bipradas Piplai composed in *circa* 1498. Bipradas mentions of the shrine of goddess Betai Chandi at Betor after whom the immediate vicinity of the temple came to be known as Betaitala. The deity is still in worship but vestige of her original temple, well-known to the merchant community towards the end of the 15th century, can now be traced. Betor at the junction of the Saraswati and the Bhagirathi perhaps grew up as a subsidiary port of Saptagram; the sea-going vessels sailed mostly up to this point while smaller vessels ferried cargo from Saptagram up and down the Saraswati and later the Bhagirathi From an account left by Cesare Federici, who visited Betor in 1575, it appears that a large temporary market used to be held here during the winter months when many thatched huts were set up only to be demolished after the season. Betor was subsequently abandoned by the European traders as the Saraswati began to dry up and the Bhagirathi moved away towards the east.[2] Hence, Betor, which was shown as an important place in the maps of De Barros (1552-1613) and Blaev (1645-50) disappeared from the maps from the second half of the 17th century excepting those of Rennell's. To guard against the movements of Dutch and Arakanese pirates up the river. the Mughals later built

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[1] For details, see Chapter II.
[2] For details, see the section on rivers in Chapter I and that on river borne communications in Chapter VII.

a fort here which was subsequently occupied by the East India Company. The present city of Howrah belonged to *Mehāl* Purah in *Sarkār* Satgaon appearing in Todar Mal's rent roll. A part of it was situated in *Parganā* Paikan which cannot be traced in any of the three well-known rent rolls, viz. of Todar Mal, Shah Shuja and Murshid Quli Khan but is mentioned in a list of villages prepared in 1714 by the English for submitting the same to Emperor Farruksiyar for acquiring zemindari rights on the west bank of the river opposite Calcutta.[1]

After the settlement of the British in Calcutta in 1690 the morphological character of Howrah underwent radical changes heralding, within a few decades, a distinctly urban landscape. Original village sites still survive in the various names of quarters (*pāḍās*) into which the city is divided in spite of the Western nomenclature of streets. The old residential nuclei have developed according to the reputation and cultural influence of particular families who settled there prior to or during the early days of European rule. Before the middle of the 18th century South Bantra became well-known for the Chakrabarti families whose ancestor, Nursing Dev, bought three villages here together with the hamlet of Ichhapur under a royal mandate for the nominal rent of one rupee per annum for each of them. Bamangachhi seems to derive its name from the Brahmin scholars, locally known as Siromanis, who settled there towards the beginning of the 18th century. Raychaudhuris, the zemindars of Sibpur, seem to be one of the oldest families with about a 500-year old history in Howrah. Santragachhi was settled by cultured Barendra Brahmins when it was mostly a forested area. The Barendras in those days were to be found mostly in North Bengal which was known as Barendrabhumi. Caste or occupationwise nomenclature of the various localities of the old town is still retained, namely Tantipara or the weavers' quarters, Kalupara or the seat of oilmen, Mudipara or the abode of grocers, Dhobipara or the locality of washermen etc.

The first non-Indian settlement in the town belonged to the Armenians. This was followed by those of Europeans who began constructing buildings both for industrial and residential purposes. Towards the first quarter of the 19th century, important units of the urban landscape started growing at Ghusuri, Salkia, Howrah and Sibpur due mainly to the industrial-residential establishments of Messrs. Stalkarts, Mr. Bakon and Mr. Jones, each devoted to different branches of industry. Stemming from these the riverside grew up into a compact industrial-residential zone belonging mostly to the Europeans. By Rennell's time (1779) several roads radiated from Salkia, one to Burdwan *via* Chanditala, the second to Adampur *via* Makardaha and the third to Thana Muckawa *via* Makardaha. (The industrial evolution of Howrah has been sketched in sufficient

[1] For details see the section on the origin of the name of the dist. in Chapter I.

details by Prof. A. B. Chatterjee in Appendix to Chapter V which need not be repeated here).

The present court houses are said to have been built in 1767 for a rum distillery. Gardens belonging mostly to Armenians attracted residents of Calcutta who came there for a change. According to Walter Hamilton there was an extensive teak plantation north of the Botanic Garden. The Europeans lived chiefly along the river bank in Salkia and Ghusuri and later in Howrah and Ramkristapur. The Indians lived inland, around the present Old Khurut Road, which area is still known as *Purāni Sahar* (old town) and in Sibpur and Betor. Among the earliest public institutions of the town were the Royal Military Orphanage with a school and a cemetery attached to it, the hospital and the salt godowns. "The cemetery occupied a part of the Orphan School compound on the north of these buildings. The oldest inscription in this cemetery is on the tomb of Mr. Henry Ackland, Secretary to the Orphan Society for eight years, who died in 1791. . . . The salt godowns at Howrah existed before 1801. . . and were removed to Salkhia on the opening of the railway. . . . Among other early institutions may be mentioned Bishop's College and the churches. . . . The first Church of England church was built at the instance of the Principal of Bishop's College. . . . It was finished in 1831 and consecrated under the name of St. Thomas' Church. The Roman Catholic Church in Cullen Place was built in 1832. . . . The earliest church, however, was one built in 1821 by Mr. Statham, the first Baptist resident missionary.

"Howrah, which Bishop Heber described in 1823 as a place 'chiefly inhabited by shipbuilders,' and which in 1848 was referred to as 'the Wapping of Calcutta inhabited chiefly by persons connected with the docks and shipping,' began to expand . . . in the middle of the 19th century. Not only did the docks increased in size and in number, but other large industrial concerns were started, such as engineering yards, sugar factories, flour mills, and, after the sixties of the 19th century, cotton mills, jute mills and jute presses The selection (in 1850) by the East Indian Railway authorities of Howrah as the terminus of their line and the construction of the bridge over the Hooghly gave an . . . impetus to its development, which in recent years has been further facilitated by the entry of the Bengal-Nagpur Railway, by the opening of two light railways, and by the starting of steamer services. . . . A separate Magistrate was appointed in 1843, who was vested with the powers of a Deputy Collector in 1860, and ultimately was assisted by a Joint-Magistrate, several Deputy Collectors and several Courts of Honorary Magistrates. The police force was reorganized in 1862, and placed under a District Superintendent in 1863. The jail, after various changes, has been made a third class district jail and located in a large building. The Civil Courts have been enlarged and placed in a separate building, where

a Small Cause Court Judge also holds an occasional court. The town was constituted a municipality in 1862, and is now the largest outside Calcutta both in poulation and income.

"The Zila school was opened in 1845 for native boys, and the St. Thomas' School in 1864 for European boys. The Bishop's College was replaced in 1880 by the Engineering College, now the centre of high technical education in Bengal. The Howrah General Hospital was started in 1861, and is the largest hospital in Bengal outside Calcutta, with separate wards for Europeans, native males and native females. A veterinary hospital, named after its donor Kumar Rameswar Malia, has also been established. Among other buildings may be mentioned the salt godowns at Salkhia, which contain enormous stocks of salt and are served by a siding of the East Indian Railway, and the Town Hall built by private subscriptions over the municipal buildings."[1]

On the basis of the lay-out of roads, types, density and distribution of houses, open spaces, tanks and marshy areas, the present city may be divided into three broad zones—the riverside, the central part and the western fringe. The characteristics of the first are broader and straighter roads showing better planning. The houses are also more modern but open spaces are rare. The tanks though few are comparatively bigger and well-kept. Since the land gradually slopes away from the river bank, this zone is comparatively free from water-logged areas conspicuous in the western parts of the city North of the railway station runs the long over-bridge ending in Buckland Road flanked by the Magistrate's residence, the civil and criminal courts, the post office, the municipal office, the old church, the cemetery, the police barracks and the hospital. Howrah Maidan, the lungs of the city with an area of about 20 acres, was set apart as a recreational ground before the middle of the 19th century when it was more than twice its present size. Subsequent encroachments made by the Grand Trunk Raod, the Church, the General Post Office and the educational institutions have sadly reduced its original dimensions. Along the river front north of Howrah Bridge extends a continuous series of docks and godowns. Between them and the Grand Trunk Road are located the roperies, timber yards, engineering works and oil mills ending at Ghusuri in cotton mills and jute presses. Behind the docks lie a large *dharmasālā* and the European quarters; and beyond them the Indian quarters including several large slums like Tindelbagan and Ghasbagan. South of Burn Company's yard a considerable area has been reclaimed by the Port Commissioners and it now accommodates godowns. To the west of the reclaimed *chars* a large tract of land was acquired by Government in 1907 on which stand the new jail, the offices of the railway

[1] L. S. S. O'Malley and M. Chakravarti—op. cit. pp. 163-6.

police and the quarters of certain officials. Beyond them lies the Tuesday-hat of Ramkrishnapur, the biggest mart for handloom cloths in lower Bengal. Further south are found various factories such as flour mills, jute mills and presses, timber yards etc. until the South Eastern Railway's goods yard is reached at Shalimar Point. On the river bend are located other factories, roperies and paint works ending in the large compound of the Engineering College at Sibpur. Though outside the municipal limits, the most interesting and frequently visited recreational area in or around the city is the Botanic Gardens of Sibpur.

The central zone is predominantly an older area with its winding lanes and by-lanes indicating an unplanned growth. The houses are mostly very congested and open spaces are extremely rare. The land gradually slopes away towards the west, the lowest level being reached near Shalimar. Ghusuri on the river bank is 20 ft. while Santragachhi and Shalimar further inland are only 12 ft. above mean sea level. The local population broadly consists of two classes—resident Bengalees and immigrants. The latter generally live in overcrowded slum areas while the former are now retiring more and more to the outskirts of the city.

The western fringe of the town is rather rural and presents a more open landscape marked by isolated groups of settlements. The streets are few but winding though the more important thoroughfares are comparatively straight. Mostly dotted by cutcha houses, this zone is, however, coming up with big brick buildings particularly in the old settlement nuclei at Santragachhi, Bantra and Ramnathpur and Baksara. Compared to the central zone the houses are less closely placed. Large marshy areas juxtaposed to betel plantations or kitchen gardens are a common sight here.

Occupying the east-central part of the city, the administrative area adjoins the south-western portion of the railway terminus and warehouses lying east of the Howrah Maidan and the Grand Trunk Road and west and north-west of the residential quarters which separate it from the Ramkrishnapur end of the Sibpur-Ramkrishnapur industrial area. Contiguous to the administrative area lies the central business and commercial zone adjoining the eastern part of the dense residential district traversed by most of the transit routes. The earliest nucleus of the central business sector can be traced from the middle of the 19th century at the Tuesday-*hāṭ* set up at the request of the weaving communities of Howrah, Hooghly and Midnapur by the Mullicks of Andul at a place known at that time as Charakdanga. The river and the Grand Trunk Road form the two main arteries of the city, the greatest congestion of traffic taking place on the Grierson Road leading to the Howrah Bridge. The river bank is similarly crowded with boats which load and unload an immense quantity of cargo between Bandhaghat at Salkia on the north and Sibpur

Ghat on the south. The Grand Trunk Road is an ever-busy thoroughfare flanked by rows of small shops and several large markets. Four linear belts of retail shopping extend from the central business area of the city. Starting from the north, these are the Belilios Road approach, the Panchanantala-Deshapran Shasmal Road, the Netaji Subhas Road and the Sibpur Road approach. The retail shopping activity of the rest of the city is mostly concentrated in isolated markets located at nodal points such as Kadamtola, Bataitala, Chatterjee Hat and Ghusuri, or near old village centres such as Khurut and Haraganj, or in new residential localities like Andul Road and north Ghusuri. Among the large marts, Ramkrishnapur has long been famous for wholesale trade in rice, pulses, other cereals, mustard oil, molasses etc. The Howrah fish market and Biswanath Babu's Bazaar dealing in large quantities of betel leaves, both located near the Howrah railway station, are also important wholesale marts.

There are 13 public parks in the city including the Botanic Garden. Of these only 4 are children's parks in north Bantra, central Salkia, Baje Sibpur and Sibpur. Of the others the Jatadhari and Sraddhananda Parks in the north, the Dudhwalla Park in the south, the Howrah Maidan, the Chamaria Park and the Belilios Park in the north-central part of the city are important. The last-named has a well-laidout garden with playgrounds, pavilions, flower beds, nurseries and tanks. With an area of about 28.5 acres it is considered a beauty spot of the city.

The old-time industries of Salkia, north Bantra, Santragachhi, Ramnathpur, Baksara and Thana Makua still retain their predominantly household character and are, as such, located in residential localities. The mixed residential-cum-industrial areas in Bantra, central Salkia and Bamangachhi are conspicuous among the regions of this category. Bantra is an overspill area of the small-scale industrial zone along the Belilios Road. Most of the manufacturing units are accommodated in newly constructed sheds while some occupy dilapidated buildings in residential quarters. The hosiery industry is located mostly in old houses in the built-up areas. Towards the western fringe of the city, betel-vine plantations and kitchen gardens thrive.

Mainly at the initiative of public authorities, the Kadamtala, Chatterjee Hat and Shalimar areas have witnessed, since Independence, the construction of many multistoried buildings, the same signs of progress, at private-cum-public enterprise being also noticeable at Ghusuri, Shalimar, Salkia and Sibpur by replacing or improving upon the erstwhile slums. According to official statistics the total area of 25 recognized *bustees* (slums) within the municipal limits is about 400 acres. Only 9% of *bustee* huts have pucca walls and 3% thatched roofs. About 36.6% of them have pucca floors with rooms

of an average size of 9 ft. × 5 ft. There is no arrangement for water supply in 83.6% of the huts. The slums are concentrated mostly along the G.T. Road and in the industrial areas of Ghusuri, Banaras Road, Belilios Road and Andul Road. The Ramkrishnapur-Sibpur industrial zone is served by the Gholadanga, Benepara, Kalabibi-bagan, Banstala Ghat, Kundu Bagan, Priya Manna, Ghosh Bagan, and Kazidanga *bustees* with a total area of about 109 acres. The Belilios Road and Bantra industrial sector is served by Kukurbhoka, Mahisyapara, Fansitala and Jolepara slums spread over 142 acres. Central Salkia and neighbouring factory sites have 153 acres of *bustees* lying mostly along the G.T. Road.

Educational institutions

Most of the present educational institutions in the city are of recent origin and the *tols* of Santragachhi, Bamangachhi and Baboodanga, once famous for their quality of teaching, have disappeared.[1] In O'Malley's time (1907-8) the city had 8 High schools with a total roll strength of 2,213. Except the Howrah Zilla School, the rest were unaided. Two technical schools were located in the Bengal Engineering College, Sibpur and the Railway Carriage and Wagon Workshops at Lilua. Howrah now boasts of 4 colleges, 21 High schools for boys, 10 High schools for girls, 73 Primary schools for boys and 23 Primary schools for girls. The biggest cluster of educational institutions is to be found in the central part of the town while the outlying localities of Ramrajatala and Baksara have smaller clusters. The Narasinha Dutt College, the first degree college in the city for general education was founded in 1924. Its convenient location in the Belilios Park away from the densely built-up residential areas was due to the munificence of late Mr. I. R. Belilios. The Howrah Girls' College was opened in 1946 and the Dinabandhu Institution in 1948. The distribution of libraries also shew a concentration in the central part of the town while in Sibpur they form a separate nucleus around the local educational institutions.

Places of worship

Besides the three churches already mentioned, there are many temples and mosques in the city. Sibpur and Bharpara, which are Hindu localities, form a prominent zone of temples while Kazipara, a Muslim quarter, houses a number of mosques. The very old temple of Betaichandi used to be on the river-bank in the 15th century but the Bhagirathi has since shifted to the east and the deity now occupies a small building hardly resembling a temple in this part of West Bengal. The decline in the importance of the goddess, whose votaries were mainly merchants engaged in river-borne trade, seems to have started with the recession in the commercial status of Betor. The most notable temple in Bharpara is the one built by the Andul Raj; its fame too seems to have waned with the change in the course of the river. There are also many Hindu shrines in the Bantra and Pancha-

[1] For an account of the early European style educational institutions in the city, see Chapter XIII.

nantala localities. The latter place derived its name from the popular deity Panchananthakur which has been in existence here for at least 135 years. His clay image has a deep red complexion and it rides a cobalt black horse sidewise. With a trident in his right hand and a trumpet in his left and with a third eye on the forehead and snakes jutting out from his matted locks, the deity appears to be a variant of Siva and is not to be confused with the rural god of the same name supposed to cure children's ailments. The temple, however, contains a few of such folk-gods, namely Sasthi (presiding deity of child-birth), Sitala (who guards against smallpox) and Manasa (the serpent goddess). The main festival of Panchananda is *chaḍak* which lasts for 3 days ending on the last day of *Chaitra* (mid-April) and is attended by a large fair. The Siva temple at Sibpur erected by Raja Ramchandra Ray of Andul, and the Tibetan temple at Bhotbagan permitted to be built at its present site by Warren Hastings at the request of Tasi Lama of Tibet are prominent shrines in the southern and northern parts of the city. The two localities are apparently named after these shrines. Another important temple is the temple of Ramraja at Ramrajatala in the western fringe of the city within Jagachha P.S. The god, surrounded by a myriad ancillary deities, has an imposing clay image about 20 ft. high. Sita, his consort (of comparable proportions) sits by his side. The annual festival and fair last for about 4 months from the Rāmnabami day in the Bengali month of *Chaitra* (April) and continues till the last Sunday of *Srāvana* (August) with an average daily attendance of about 10,000 persons. The other attraction of Ramrajatala is the Sankar Math near the Ramrajatala railway station founded in 1326 B.S. (A.D. 1919) and named after Jagatguru Sri Sri Sankaracharyya. A mile to the south of Ramrajatala stands the *Navanārikunjara* temple housing a 20-feet high image depicting how nine maidens (*nava nāri*) form themselves into the semblance of an elephant and provide a joy ride to Krishna and Radhika seated on top. The annual worship and attendant fair commences on the fullmoon day of *Baisākh* (April) and the immersion ceremony takes place on the last Sunday of *Srāvana* (July).

Very little authentic information is available about the many mosques in the city. It is, however, certain that some of them are pretty old having been set up during the Muslim rule. Most of the Jain temples belonging to the Marwari community are located along the river between Ghusuri and Salkia where the community is settled. Sikh Gurdwaras are the latest additions to the places of worship in the town. One of them is at Sibpur and the other in the central part of the city. Both are near road transport termini reflecting the intimate association of this small community with road transport.

There are in all 17 cinema houses mainly situated in the central part of the town while some are in Salkia and Sibpur. Many physical-culture clubs, locally known as *ākhḍās*, exist in different parts of the

city. The Railway Institute is one of the oldest and most renowned local clubs.

Hospitals

The Howrah General Hospital was the only institution providing medical facilities to the general public since 1861 till the opening of the Soorajmull Nagarmull Hospital in 1948 (this hospital has been expanded and renamed as Hanuman Hospital since July 1959), the T. L. Jaiswal Hospital in 1949 and the Satyabala Debi Infectious Diseases Hospital in 1951. The first is at Ghusuri while the other two are on the Grand Trunk Road in the northern fringe of the city. The railways maintain two hospitals at Bamangachhi and Howrah proper while the Bengal Engineering College has its own hospital in the Botanic Garden. The municipal charitable dispensaries are well distributed throughout the town. There are maternity wards in all the hospitals except the Satyabala Debi Hospital. Like educational institutions, the hospitals also show a trend of greater concentration in the central parts of the city with a thinner distribution at the peripheries. It is a happy coincidence that all the three new hospitals are located in northern Salkia.

HOWRAH SUBDIVISION—Occupying the north-eastern part of the district, the Howrah (Sadar) subdivision, lying between 22°30′ and 22°42′ N. latitude and 88°2′ and 88°22′ E. longitude, is bounded by the Bhagirathi on the east and part of the south, by the Uluberia subdivision on the west and part of the south, and by the Serampore subdivision of the Hooghly district on the north. It consists of 8 urban thanas, viz. Baly, Bantra, Golabari, Howrah, Jagachha, Malipanchghara, Sibpur and Lilua and 4 rural thanas, viz. Domjur, Jagatballavpur, Panchla and Sankrail covering a total area of 450.9 sq. km. (174.1 sq. miles). It is a low-lying tract with a slight and gradual slope from north to south-east and exhibiting two distinct micro regions: (1) the high riparian strips along the Bhagirathi, the Saraswati and the Kana Nadi; and (2) the extensive swamps separating them, which are now drained by the Howrah, Barajol and Rajapur drainage channels. The land is generally fertile, yielding abundant crops of winter-rice, jute, pulses, sugarcane, potatoes and betel-leaves.

Rural areas cover 359.6 sq. km. (138.9 sq. miles) and urban areas 91.3 sq. km. (35.2 sq. miles) of the subdivision. The only municipal town is comprised in the Howrah Corporation the exact boundaries of which have been given in Chapter XII. In 1961, it had a population of 11,74.651 persons of whom, 4,23,944 lived in rural areas and 7,50,707 in urban areas. Hindus numbered 9,95,858 (84.78%), Muslims 1,72,167 (14.69%) and Christians 2,949 (0.25%). The average population density in the subdivision was 6,747 persons per sq. mile, the corresponding figures in the urban and rural areas being 21,291 and 3,051 respectively.

In 1961, educated and literate persons in the sub-division numbered 4,92,230 (41.9%) of whom 3,45,016 (29.4%) were males and 1,47,214 (12.5%) females. There are 8 degree colleges located at Howrah city, Belur, Baly, Sibpur and Jhorhat. In 1961, the total working population of the subdivision consisted of 6,29,519 persons of whom 6,05,592 were males and 23,927 females. Manufacturing industries other than household industries constituted the principal occupation of the subdivision engaging 1,73,483 persons (or 27.55% of the total working population of the subdivision). Next comes agriculture in which 1,49,830 persons were employed accounting for 23.8% of the total working population of the subdivision. The heavy and large-scale industries and brick manufacture are concentrated in the urban belt bordering the Bhagirathi while the rural hinterland to the north and west is given to agriculture. Rice, jute, pulses, sugarcane, potatoes and betel-leaves are the major crops.

The subdivision is well served by railways and road communications. The main and the Howrah-Burdwan Chord line of the Eastern Railway, the Howrah-Kharagpur section of the South Eastern Railway and the Howrah-Amta and Howrah-Seakhala Light Railways cover large areas of the subdivision while the Grand Trunk Road, the Andul High Road pass through its eastern and central parts. Besides, a number of all-weather metalled roads, mostly provided with regular bus services, connect various parts of the subdivision.

The Howrah General Hospital is not only the biggest but also the oldest hospital in the subdivision. Other important hospitals are the Tulsiram Lakshmidevi Jaiswal Hospital, the Satyabala Infectious Diseases Hospital on the G.T. Road (North). The Tuberculosis Hospital near Sibpur Botanic Garden and the Sankar Math Homoeopathic Medical College and Hospital at Ramrajatala are other medical institutions. Four primary health centres are located at Jagatballavpur, Domjur, Jagadishpur and Deulpur and 10 subsidiary health centres, several maternity and child-welfare centres and charitable and ordinary dispensaries lie at various places in the subdivision.

Specimens of mediaeval Bengali temple architecture exist at many places but none of them is of superior merit. Places of Hindu pilgrimage include the Makarchandi temple at Makardaha, Panchananda and Kali temples at Narna, Garhchandi temple at Jhingra, Siddheswari temple at Andul and a shrine dedicated to Bisalakshi at Sankrail. Large fairs are held at these places during the corresponding religious ceremonies and also at Ramrajatala from April to August, at Dasnagar in August on the occasion of *Janmāṣṭami* and in January at Niz Balia at the time of the annual worship of the local deity Siṁhabāhini.

JAGATBALLAVPUR—A large village in the police station of the same name on the left bank of the Kana Damodar 26 km. (16 miles)

north-west of Howrah town. It can be reached from the Jagatballavpur station on the Champadanga section of the Howrah-Amta Light Railway as also along the asphalt road running from Howrah almost parallel to the railway track. In 1961, the village had a population of 2,437 persons of whom 785 (or 32.2%) were educated and literate. There are two Primary schools, a Higher Secondary Multipurpose school, a junior training college, a rural health centre with fifty beds, a maternity and child welfare centre, a library, a post office and a daily market here. The place has a number of sand quarries on the old bed of the Damodar. Potters of the village manufacture a special type of terracotta rings for lining wells which are in high demand in the markets of Howrah and Hooghly districts.

It is said that the place was originally known as Mamdanipur but its present name originated from its association with Jagat Singh, son of Man Singh, the Rajput general of Akbar and Jehangir. Jagat Singh is supposed to have halted here for some time during his sojourn in Bengal.

The mosques, temples and ruins of residential buildings amply testify to the former prosperity of the village. The Sahi mosque is believed to have been built during the reign of Aurangzeb. There are three *āṭchālā* Siva temples here displaying terracotta decorations on their facades. The first, at Kalitala, was built in A.D. 1740 while the second, a little to the west, bears the date 1764. The builders in both cases were local Suvarnavaniks who formed a very prosperous community here in the 18th and 19th centuries. The third temple, a small structure in the Shashthitala locality, was erected in 1774 by a priest of the Suvarnavanik Pala family.

Jhingra

Some 5 km. (3 miles) north-west of Jagatballavpur is the village of Jhingra which can be conveniently reached from the adjoining Ichhanagari station on the Champadanga branch of the Howrah-Amta Light Railway. Situated on the Kana Damodar, which was a navigable waterway up to the thirties of the present century, Jhingra flourished as an inland port and a busy centre of trade and commerce serving a large area including such places as Maju, Munsihat and Jangipara-Krishnagar (in Hooghly district). Major items of import were salt and kerosene while exports included paddy, rice, potato and molasses (*gur*). The port and the mart were almost entirely under the control of the local Tambulivaniks and Gandhavaniks who maintained regular cargo vessels. With the dereliction of the Kana Damodar around the thirties of the present century, the prosperity of the place became a thing of the past.

LILUA—See Howrah City.

MAKARDAHA—A large and prosperous village in Domjur thana on the right bank of the derelict Saraswati channel situated 13 km.

(8 miles) west-south-west of the district headquarters. The main line of the Howrah-Amta Light Railway touches the village at a station of the same name while an asphalt road on which regular bus services ply runs almost parallel to the railway track from Howrah city. In 1961, the village had a population of 3,348 persons of whom 1,264 (or 37.8%) were educated and literate. It contains 7 Primary schools, 2 Higher Secondary schools, one for boys and the other for girls, 2 libraries (one of which is the noted Sāraswat Library), a *ṭôl* and a post office. Formerly, there were several *ṭôls* in the village teaching *Vyākaraṇa*, *Nyāya* and *Darsana*. The village is served with electricity.

The shrine of Makarchandi, after whom the village is named, is a reputed place of Hindu pilgrimage. Legend has it that Srimanta, the merchant hero of *Chandimaṅgal*, was an ardent devotee of the goddess and he used to stop here and make offerings to the deity while journeying along the Saraswati on his many voyages. A *hintāl* tree on the south-west of the temple is pointed out as the anchor of Srimanta's barge. It is said that the original temple having fallen down the goddess appeared in a dream to the blind zemindar Ramnarayan Kundu Choudhury of Andul-Mahiari and asked him to build a temple for her. Accordingly, Ramnarayan erected the present *āṭchālā* shrine in 1801 and reportedly recovered from his blindness. The deity is represented by a rectangular piece of black basalt sticking out of a square depression in the centre of the sanctum. A close examination reveals that the stone is an architectural member, possibly the corner piece of a *sikhara* tower of modest height. The top of the stone besmeared with vermilion is regarded as the face of the goddess. The *Dôl* festival of Makarchandi held on the fifth day after the general *Dôl* ceremony in the month of *Phālgun* (February-March) is the principal festival of the place. The ceremony which continues for fifteen days is attended by a fair and a spectacular display of fireworks.

MELLAK—An old village in Bagnan P.S. situated on the left bank of the Rupnarayan 6½ km. (4 miles) west of the thana headquarters. It is connected with the Deulti railway station on South Eastern Railway by a mile-long non-metalled road while another narrow metalled road joins it with the Calcutta-Bombay National Highway No. 6 at a point 5½ km. (3½ miles) west of Bagnan. In 1961, the village had a population of 2,732 persons of whom 1,030 (or 37.7%) were educated and literate. The uncommon name of the village is attributed to the fact that formerly it was the seat of a number of *Kulin* Brahmin families belonging to different endogamous groups called *mel*. Being a *lôk* (fixed area) inhabited by Brahmins of specified *mels*, the place came to assume the name Mellak (or Mellok) by a simple conjunction of the two words.

The chief attraction of the village is the large brick built temple of Madangopaljiu which is of considerable archaeological interest.

Built in A.D. 1651 it is one of the earliest extant examples of the *ātchālā* type and the terracotta figures and motifs displayed on the facade and around the archtops of the entrance doorways provide early specimens of the temple terracotta art. Although the structure is of brick, stone doorsills have been used in the entrances to the sanctum. From their shape and the carvings on them it appears that they originally belonged to an ancient temple roughly assignable to the Pala period. The black basalt image of Vishnu leaning against the south wall of the front porch is also attributable to the same period.

The temple is said to have been built by Mukundaprasad Raychowdhury, an influential zemindar of the locality. According to popular belief he was a man of exceptional physical prowess whose many acts of valour are recounted to this day.

Samtaberia

At Samtaberia, a part of the village of Mellak, Saratchandra Chattopadhyaya, the celebrated Bengali novelist, had built a country house where he spent the last days of his life. It contains some of his personal effects and a portion of his library and attracts many visitors.

Panitras

In the adjoining village of Panitras the local people have recently started an institution called Sarat Smriti Mandir to perpetuate the memory of the great novelist. The library and museum run by this organization have been described in Chapter XIII.

MUGKALYAN—A large village in Bagnan P.S. of Uluberia subdivision situated about 5 km. (3 miles) south of Bagnan Railway station and connected with it by an asphalt road on which regular bus services ply. In 1961, it had a population of 3,973 persons of whom 1,615 (or 40.7%) were educated and literate. The village has a Higher Secondary school for boys, established as early as in 1866,[1] a High school for girls, 2 Primary schools (one each for boys and girls) and 2 libraries. Mugkalyan played a distinguished role during the freedom struggle. In 1905-06, many local young men joined the anti-Partition movement and in 1942, it became a centre of secret societies.

Harinarayanpur

To the contiguous east of Mugkalyan lies Harinarayanpur, an ancient site, where casual diggings have exposed the remains of brick buildings, ring wells and potteries. There is an undulating mound here occupying an area of about 16 *bighās* which awaits proper exploration. The finds so far recovered from the place include some terracotta figurines (including 2 images of Vishnu), a terracotta seal (now preserved in the Nabasan museum) and black potsherds the age of which have yet to be determined. On the full moon day in the Bengali month of *Phālgun* (February-March), a well-attended fair is held at the local temple of Simhavāhini, a variant of goddess Durga.

[1] See Chapter XIII on Education and Culture.

Chandrabhag

About a mile north-east of Mugkalyan is the village of Chandrabhag which, in 1961, had a population of 1,613 persons of whom 1,005 (or 62%) were educated and literate. It has a higher secondary school for girls, a primary school (both for boys and girls), a library and a Government dispensary. The village contains a group of 13 small Siva temples, each containing a *lingam*, founded by one Chhakuram Chottopadhyaya in 1733 Sakabda (A.D. 1813). The shrines, except three, are now in a dilapidated condition. The local seat of a village deity, Chand Ray, is frequented by many devotees throughout the year.

NARNA—A big village in Domjur P.S. of Sadar subdivision situated about 5 km. (3 miles) north-north-east of the thana headquarters with which it is connected by a country road jeepable in fair weather. In 1961, it had a population of 3,185 persons of whom 761 (or 23.9%) were literate and educated.

The village is well known throughout the district and much further afield for its famous deity Panchananda who is widely believed to possess miraculous powers for curing paralysis, gout, barrenness in women etc. His efficacy is thus entirely different from that of the popular village godling of the same name who is supposed to cure children's diseases. Panchananda is worshipped here as a spirit in an earthen jar (*ghat*) surmounted by a green coconut (*dāb*). His shrine consists of a cemented platform raised around a peepul tree and roofed by corrugated tin sheets. On the western side of the platform the symbol of the deity is installed along with the image of Kalabhairab who is his companion here.

The priests of Panchananda, Pallav Gop by caste, distribute medicated soil to the believers which is supposed to cure the aforesaid diseases. The medicine is actually ratsoil but is collected in an esoteric manner attended with secret rituals, the knowledge of which is kept strictly confined within the *sebāit* family. Many people from the districts of Howrah, Hooghly. Burdwan and 24-Parganas as also from Calcutta visit the shrine throughout the year to collect the medicated soil or to make promised offerings on obtaining relief. The largest assemblage, however, takes place during the last four days of the Bengali year (middle of April) when the *Gajan* festival of the deity is observed attended by a big fair. Another important local festival is the *Phul Dôl* of Panchananda held on the full moon day of the Bengali month of *Baisākh* (April-May).

PATIHAL—A very large and prosperous village in Jagatballavpur P.S. of the Sadar subdivision situated about 1½ km. (one mile) south of the thana headquarters. It is connected by a mile-long non-metalled road with the Bargachhia railway station on the Howrah-Amta Light Railway as also with the asphalt road running

almost parallel to the railway track from Howrah city. In 1961, it had a population of 6,235 persons of whom 2,186 (or 35.1%) were educated and literate. Here are located 5 Primary schools, 2 Higher Secondary schools, one for boys and the other for girls, an adult education centre, 2 libraries, a rural health centre and a post office. The place is served with electricity.

Patihal is a notable centre of lock manufacturing, the Central Lock Factory of the State Government being situated here. The village also contains a large number of hereditary locksmiths producing locks in their household workshops. This industry has been dealt with in Chapter V.

The Mazumdars, Rays and Deys are important families of the place. The remains of the past glory of the Mazumdars, an important zemindar family of the district, can still be traced in their large dilapidated residence and the temples they erected in the Mazumdarpara locality. One of the shrines, a *pancharatna* structure dedicated to Sridhara, displays terracotta ornamentation above the entrance arch.

The annual *pujā* of Rakshākāli held in the month of *Jyaiṣṭha* (May-June) is the principal festival of the village which is attended by a big fair. Another fair takes place in the Raypara locality during the *Dôl* festival of the Ray family.

Bargachhia

Bargachhia is the junction station for the Amta and Champadanga sections of the Howrah-Amta Light Railway. In 1961, it had a population of 1,496 persons of whom 359 (or 24%) were literate and educated. The village, served with electricity, has a Primary school, a Higher Secondary school, a library, a rural health centre and a post office.

Mansinghpur

About a mile south-east of Bargachhia is the village of Mansinghpur where, according to a prevalent legend, Maharaja Man Singh, the general of Akbar, had pitched his camp while on the Orissa campaign, and hence the name of the village.

PENRO (PAR RADHANAGAR)—A village in Amta P.S. of Uluberia subdivision situated 8 km. (5 miles) north of the thana headquarters with which it is connected by a metalled road. It can be conveniently reached from Munsihat railway station on the Howrah-Amta Light Railway along a 5-mile long asphalt road on which regular taxi services are available. The Madaria Khal flows north-south across the village dividing it into two unequal halves. In 1961, it had a population of 1,623 persons of whom 559 (or 34.4%) were educated and literate. Here are located a Primary school, a library having a collection of 3,751 books (in June 1967), a health centre, a hospital and a large wholesale market for rice, vegetables, fish and casein held twice a week on Tuesdays and Saturdays. Earthenware produced by the potters of the village are highly prized in the district and beyond for their durability and finish.

Raj family

The village is the place of residence of the Rays, a collateral branch of the Raj family of Garh Bhabanipur. The house was founded in the second half of the 16th century by Srimanta Narayan Ray, brother of Krishna Narayan Ray of the main line, who received a portion of the property of Garh Bhabanipur Raj and took up his residence here. It appears that the Penro house was later subjugated by Garh Bhabanipur Raj and continued to remain so until the principality of the latter was overrun by the Maharaja of Burdwan around 1712. With the fall of Garh Bhabanipur, the properties of the Rays of Penro were taken over by the Maharaja of Burdwan reducing them to the status of petty zemindars under the Burdwan Raj.

The most eminent son of this family was Ray Gunakar Bharat Chandra Ray (1712-60), the famous Bengali poet of *Annadāmaṅgal* fame whose life and works have been discussed in Chapter XIII. A vacant piece of land to the north of the local Bisweswara temple is pointed out as his birth place. Although no memorial has been erected on the spot, the school in the adjoining village of Harispur and the village library have been named after him.

A rectangular area of about 60 *bighās* in the southern part of the village which was once encircled by a moat, traces of which are still visible, is shown as the place where the *garh* (fortress) of the Rays had once stood. There are two small *āṭchālā* Siva temples here built in 1819 and 1891. The *dargāh* of a Muslim saint called Ali Saheb at the Fakirpara locality is a renowned place of Muslim pilgrimage. During the *muharram* festival thousands of Muslims from neighbouring places come to pay homage to the saint and to attend the fair held for the day. Colourful processions are taken out on the occasion with group display of gladiatory combats with bamboo sticks. The Hindus observe the *gājan* festival in honour of Jajneswar Siva in the month of *Chaitra* (March-April). The traditional worship of goddess Durgā performed by the Ray family is also largely attended by the local people.

Penro Basantapur

Bordering the eastern limits of Penro lies the village of Basantapur in which the Raj family of Garh Bhabanipur took up their abode following the occupation of their territory by Maharaja Kirtichandra of Burdwan. Subsequently, the Burdwan Raj made liberal land grants to the members of the vanquished family who made Basantapur their permanent home.

With a population of 5,912 persons in 1961 (and a literacy rate of 34.5 %), Basantapur is one of the largest villages in the district. Here are located 3 Primary schools, a Junior High school (established in 1897), a *madrasah*, 3 libraries, a rural health centre and a market held thrice a week. There are two large tanks in the village known as *Hari Malliker Dighi* and *Rānir Dighi*. On the bank of the latter stands a derelict Siva temple built, according to tradition, by Rani Basanta Kumari Devi of the Burdwan Raj family.

PICHHALDAHA—A large village in Syampur P.S. and a well-known place of Vaishnava pilgrimage situated 6 km. (4 miles) south of the thana headquarters. It can be reached from the nearest railway station of Bagnan on the South Eastern Railway by proceeding up to Kamalpur along an asphalt road provided with bus services and then turning south-east to follow a non-metalled road up to the village. In 1961, it had a population of 3,838 persons of whom 1,095 (or 28.5%) were educated and literate. It is an old place having been shown in old European maps; De Barros (A.D. 1550) mentioned it as Pisolta while Gastaldi (A.D. 1561) referred to it as Picalda. Formerly, it was a trade centre of importance and a place where boats used to cross the Rupnarayan.

It is said that Sri Chaitanya visited Pichhaldaha on his way to Puri. According to *Chaitanyacharitāmrita* of Krishnadas Kabiraj, however, he sailed to Panihati from Pichhaldaha (*Madhyalilā*, canto XVI: verses, 159 and 199), the latter place being identified by some with the village of the same name in Midnapore district situated not far from Tamluk.[1] Others think that Krishnadas Kabiraj actually referred to the present village in Howrah district. A place in the southern part of the village is believed to be the spot where Sri Chaitanya had sat for rest. It is marked by a *Baṭ* (Ficus Bengalensis), an *Aswaththa* (Ficus Religiosa) and a *Tamāl* tree, all regarded as holy. Close by in a small mud-built shrine, a clay image of the Master, installed about 30 years ago, is regularly worshipped. To celebrate the birth anniversary of Sri Chaitanya the villagers organize a 3-day long festival starting from the *Dôl Purnimā* day in the month of *Phālgun* (February-March) which is largely attended by Vaishnavas.

RASPUR—A village in Amta P.S. of Uluberia subdivision situated on the left bank of the derelict Damodar channel 5 km. (3 miles) north-west of the thana headquarters with which it is connected by a cutcha road forming the top of the eastern embankment of the river. In 1961, it had a population of 1.937 persons of whom 699 (or 36.1%) were educated and literate. The village contains some old public institutions, namely the Higher Secondary boys' school originally established in 1876, the Higher Secondary girls' school founded in 1878 and a library started in 1883. The latter was converted into a Government sponsored rural library in 1966. There are also 2 Primary schools and a rural health centre here.

Ray family

Raspur was an important village in the late medieval period being the place of residence of influential Kayasthas and Mahishyas who flourished here as traders and agriculturists. The Kayastha Rays are said to have settled here about 300 years ago and some of the members of this family held high positions under the Rajas of Bhursut,

[1] Haridas Das—*Madhyajugiya Goudiya Sāhityer Bhougalik Ô Aitihāsik Abhidhān* (in Bengali), Part I. Nabadwip. pp. 63-64.

Nawabs of Murshidabad and Rajas of Burdwan. The most eminent son of the family was the poet Kavichandra Ramakrishna Ray who lived in the first half of the 17th century. He composed a Bengali text called *Sivāyana* which extolled the virtues and exploits of Siva. Further details of his life and works have been given in Chapter XIII.

The presiding deity of the village is Garhchandi whose 3-day long annual festival synchronizes with the Durga *pujā*. The festival is the principal religious ceremony of the village. In the month of *Phālgun* (February-March), a fair is held on the occasion of the *Dôl* festival of Radhakantajiu, the family deity of the Rays.

Binola, Krishnabati, Nischintapur and Thalia

Approximately opposite Raspur on the other side of the river lie the villages of Binola, Krishnabati, Nischintapur and Thalia containing the settlements of *Sutradharas* well-known for their proficiency in various branches of folk art such as wood carving, *pața* painting, tempera murals and clay modelling. They also build wooden chariots (*rathas*) used in connexion with the car festivals. Such chariots decorated with wooden sculptures both in relief and in the round as also murals can be found at various places in the neighbourhood and much further afield. At present their trade has considerably declined compelling many of them to abandon their traditional crafts. The services of the image makers are, however, in high demand and they make seasonal visits to towns and villages in the south-west part of Hooghly district and Jhargram in Midnapore for modelling clay images.

SANKRAIL—Headquarters of the thana of the same name in the Sadar subdivision, Sankrail, one of the largest villages in the district, is situated just below the confluence of the Bhagirathi and the Saraswati about 10 miles by river from Howrah city and 2 miles from Andul station on the South Eastern Railway with which it is connected by a metalled road. The place is more conveniently reached from the Sankrail railway station on the South Eastern Railway or along the asphalt road from Howrah on which regular bus services ply. There are 2 Primary schools, 2 High schools, one for boys and another for girls, a *madrasah*, a post office and a daily market here. In 1961, it had a population of 11,844 persons of whom 3,250 (or 27.5%) were educated and literate. From its position commanding the two rivers, it was formerly (when the Saraswati was navigable) a place of importance. It was mentioned by W. Schouten in 1664, by Charnock in his diary dated August 24, 1690,[1] and by Sir John Goldsborough as 'Sea Crowle' in 1693.[2] It also appears in Rennell's Atlas (plates VII and XIX). The only event of historical interest attaching to the place is that in 1715 the Portuguese seized a British vessel in the Sankrail Reach.

When Sri Chaitanya—so goes the legend—was sailing past the

[1] Early Annals, Wilson, Vol. I. p. 124, note 1.
[2] Diary of William Hedges. Yule, II. p. 91, note 3.

village on his way to Puri, its residents blew conches in his honour and from the sound (*rôl*) of conches (*sankha*) the place took the name of Sankharole from which Sankrail was derived. According to popular belief, an ancestor of the local Chàttopadhyaya family was asked in a dream to collect the stone image of goddess Bisalakshi from the neighbouring tank called Bisalakshi Daha which he did and enshrined her in a small mud-walled temple which was later replaced by a brick-built *āṭchālā* shrine erected by Raja Madan Ray, a zemindar of Sankrail and a contemporary of Hastings. The image of the goddess is seen only by her face, besmeared with vermilion, while the rest of her body is covered with cloth. The Chattopadhyayas still carry on the daily worship of the deity whose annual festival takes place on the full moon day of the Bengali month of *Baisākh* (March-April). On every Tuesday and Saturday of the month of *Māgh* (January-February) fairs are held at the local *āstānā* of Bada Pir, a legendary Muslim saint. Incidentally, a large number of Muslim inhabitants of the village are exclusively engaged in the tailoring industry on a household basis.

Jhorhat

About a mile north of Sankrail is Jhorhat, a large village best reached *via* Andul station on the South Eastern Railway with which it is connected by a quarter mile long metalled road. In 1961, it had a population of 6,438 persons of whom 2,570 (or 40%) were educated and literate. It contains several Primary schools, a High school, a degree college named Prabhu Jagatbandhu College and a religious institution called the Ramakrishna Ashrama.

Banupur, Manikpur and Sarenga

To the immediate north of Sankrail and separated from it by the derelict channel of the Saraswati lies Banupur which contains the National Jute Mill, a very big *hāṭ* (market) held on Mondays and Fridays and an important trading centre in bricks. Many Muslim families of the village are exclusively engaged in tailoring. It is the ancestral village of the celebrated artist Nandalal Basu. Manikpur, 1½ miles south of Sankrail, is an old place shown on the Pilot Chart of 1703. The palace of Raja Madan Ray is believed to have been located here. Sarenga, another village about a mile south-west of Manikpur, is noted for the *dargāh* of Pir Sarenga, a Muslim saint, from whom the place takes its name. It is also an old place figuring in Bowrey's Pilot Chart of 1688.

SIBPUR—See Howrah city.

THANA MAKUA—See Howrah city.

ULUBERIA—Headquarters of the subdivision and police station of the same name, situated on the west bank of the Bhagirathi 33 km. (21 miles) by rail and 39 km. (24 miles) by road south-west of Howrah city. It became the subdivisional town in 1883-84 before which that

position was held by Mahisrekha in Bagnan P.S. With an area of 5 sq. km. (1.94 sq. miles) and a population of 18,509 (in 1961) it is the largest non-municipal town in the subdivision. It was constituted a municipality in 1903 but in April 1907 the municipality was abolished as unsuitable to local conditions.

The name of the place is possibly derived from *ulu*, a kind of reed that grows profusely on low lands in the neighbourhood. It is used for making mats and for preparing the soil with which mud huts are built. Another cottage craft of some importance is the coir industry which is not developed; the local womenfolk specialize in making crude coir ropes (*bolen*) meant for igniting *biḍis* and cigarettes at *pān* shops. It is only recently that some people have started making door-mats with coir. The southern part of the district being full of coconut palms, the Coir Board opened in 1958 a coir research institute and a model coir factory at Uluberia near the railway station.

In the old Howrah District Gazetteer of 1909, O'Malley and Chakravarti gave the following history of the place. "It first came into prominence in consequence of Charnock's war with the Bengal Nawāb. The first campaign was concluded by an agreement between Charnock and the Nawāb's *Bakshi* Abdul Samad, by which the former handed over Hijili and was permitted to proceed to Chutanati and to demand a new *farman* with twelve conditions. Charnock accordingly proceeded on 17th June 1687 'with half the fleet to Ulubarreeah and Little Tana'. One of the twelve conditions was that the English should be allowed to establish themselves at Uluberia, besides keeping their factory at Hooghly. This was granted by the Nawab in a *parwānā* or order from Dacca dated 21st July 1687. It was also tentatively approved by the Court of Directors, who on 27th August 1688, wrote: 'Your town of Ulubarreeah, we understand, hath depth of water sufficient to make docks and conveniences for the repairing of any of our biggest ships, and is a healthfull place, and therefore we have added a Paragraph to our letter to our Generall that, if he can obtain a Phirmaund from the Mogull for our holding that place fortifyed with the same immunities and privileges we hold Fort St. George, we will be therewith content, without looking further, or being at any new charge in contending for any other fortifyed settlement in Bengall. ... We hope you may so manage that place or Town of Ulubarreeah which you have articled for, that it may in time become a famous and well governed English Colony.'

"The truce, however, was a hollow one, and, as the war continued, the Bengal Council with all their shipping had ultimately to retire to Madras. In the meantime, Charnock and other members of the Council changed their minds, and in reply to the above letter of the Court wrote from Madras under the date 30th September 1689—'In our Generall Letter by the *Beaufort* and our diaries of that yeare, wherein wee have layd downe Our reasons for the altering Our

Opinion about Ulubarreeah and pitching on Chuttanutte as the best and fittest up the River on the Maine, as We have since experienced, and likewise been sattisfied that Ulubarreeah was misrepresented to Us by those sent to survey it.' Uluberia thus never became 'a famous and well-governed English Colony'. It continued, however, to be a place of some importance, for it is shewn in the Pilot Charts of 1688 and 1703 and in Rennell's Atlas (Plates VII and XIX)."

The public buildings, namely the civil and criminal courts, sub-jail, police station, sub-registry office, post and telegraph office etc. are located in the eastern part of the town. The Cuttack Road proceeds west from the place and the Midnapur Canal flows through it from north to south with a bridge on it.

In 1961, Uluberia had a population of 18,509 persons of whom 10,641 were males and 7,868 females. The educated and literate numbered 5,255 (49.4%) among males and 2,075 (26.4%) among females giving an overall literacy rate of 39.6%. There are 2 Higher Secondary schools (one for boys and the other for girls), a degree college, started in 1949, and a subdivisional hospital here. According to the Census of 1961, 3,016 residents were engaged in manufacturing industries, 1,483 in Government services and learned professions, 766 in trade and commerce and 279 in transport and storage.

There is no building of archaeological importance at Uluberia. The architecturally insignificant old mosque near the court meets the religious needs of the local Muslims. The *navaratna* Kali temple on the bank of the Bhagirathi, erected in 1327 B.S. (A.D. 1920), an *āṭchālā* Siva temple, a *chārchālā* Govinda temple and a flat-roofed shrine of Savitri-Satyaban are the places of Hindu worship. The fair held on the occasion of the annual *Rās* festival on the full moon day in November lasts for a month with a daily average attendance of four to five thousand people. There is a Protestant Mission at Gangarampur, a kilometre west of the railway station which runs two Primary schools. The Saturday *hāṭ* at Uluberia is the largest cattle market in the district.

Baniban

Five kilometres (3 miles) north-west of Uluberia lies Baniban, a prosperous village, which came into existence in the seventies of the last century when a number of pioneering Bengali Brahmo families from Calcutta and certain places of Bihar settled here. In 1961, it (including the adjacent village of Jangalbilas) had a population of 2,754 persons of whom 624 (or 22.7%) were literate and educated. Although Brahmoism is now very much on the decline here, the local Brahmo Samaj Mandir (chapel), constructed in 1899, is still an object of interest in the village. The Baniban Multipurpose Girls' High School was originally founded by the settling Brahmos as a Primary school in 1904. Other institutions run by them include a

Primary school for boys and an orphanage called the Baniban Brahmo Balya Bhavan.

"In 1937 there was a firm at Baniban employing 32 men and producing about 1,000 footballs and 3,000 shuttlecocks every year for export to Calcutta."[1] The industry still survives providing employment to a number of local artisan families. In the adjacent village of Mansatala-Kotalghata the State Directorate of Industries runs a coir training-cum-production centre, the coir rope-making craft being practised here for long as a cottage industry.

The neighbouring village of Jangalbilas is a place of Mohammedan pilgrimage centring round the mosque of Pir Saheb, a Muslim saint. Popular legends connect the Pir with an unnamed Raja of Burdwan, who after witnessing a miracle performed by the Pir, made a free gift of the village to the latter.

Jangalbilas

The mosque is a *chārchālā* brick structure, unusual for a mosque, with a height of about 20 feet. Two stone door-jambs flanking the closed entrance on the south display geometrical designs and lotus motifs which, on stylistic grounds, appear to belong to the 11th-13th centuries although the mosque itself could not have been built before the 16th century. The annual festival of the saint commences on the last day of the Bengali month of *Poush* (mid-January) and lasts for 7 consecutive days. On the first two days, Hindus and Muslims alike gather on the bank of the adjacent tank and offer flowers and *sirni* into the tank in the name of the Pir.

ULUBERIA SUBDIVISION—By far the larger of the two subdivisions is Uluberia which occupies the whole of south and the western half of the northern part of the district, between 22°13′ and 22°47′ N. latitude and 87°51′ and 88°12′ E. longitude. It covers a total area of 386 sq. miles (999.74 sq. km.) and consists of the 6 police stations of Uluberia, Bauria, Syampur, Bagnan, Amta and Uday Narayanpur. It is bounded on the north by the Arambagh and Serampore subdivisions of the Hooghly district; on the east by the Bhagirathi river beyond which lie from north to south, the Alipore and Diamond Harbour subdivisions of the 24-Parganas district; on the south by the Rupnarayan river on the opposite bank of which lies the subdivision of Tamluk in Midnapur district; and on the west, from north to south, by the Arambagh subdivision of the Hooghly district, and the Ghatal and Tamluk subdivisions of the Midnapur district lying beyond the intervening Rupnarayan river. The tract is generally low-lying with a gradual slope from the north-west to the south-east. It is drained by the Damodar and its tributaries, and on the south-west, by the Rupnarayan. The north-western part is exposed to inundations but the rest of the subdivision is mostly protected by

[1] A. Mitra—1951 Census, District Handbook: Howrah. Calcutta, 1953.

embankments. The Damodar enters the subdivision near the village of Dihi Bhursut in Uday Narayanpur P.S. and then flows south-east in a meandering course till it meets the Bhagirathi near the southern extremity of the district. The Rupnarayan enters the subdivision at its confluence with the Mundeswari river near the village of Uttar Bhatora in Amta P.S. and then flows in a south-easterly course to meet the Bhagirathi north of Geonkhali in the Midnapur district. "The subdivisional headquarters were for twenty years at Mahishrekha (1½ miles north-west of Kulgachhia railway station on the South Eastern Railway—Ed.), but were removed to Uluberia in 1883. Khanakul thana was then included in this subdivision. It was transferred to the Arambagh (formerly Jahanabad) subdivision of the Hooghly district."[1]

Uluberia and Bauria, according to the census classification of 1951, and Amta, according to that of 1961, were declared non-municipal towns and they together comprise 23.8 sq. km. (9.2 sq. miles) of urban area in the subdivision. In 1961, the subdivision had a population of 8,63,826 persons of whom 7,89,441 lived in rural areas and 74,385 in towns. 17.46% and 0.11% of the population belonged to the Scheduled Castes and Scheduled Tribes respectively. Literate and educated persons, taken together, numbered 2,60,098 (30.1%) of whom 2,00,795 were males and 59,303 females. There are 57 High and Higher Secondary schools in the subdivision of which 3 have agricultural streams. There are four degree colleges at Uluberia, Amta, Bagnan and Anantapur (Syampur P.S.).

There is a subdivisional hospital in Uluberia town. Of the 6 primary health centres in the subdivision 2 are located in Amta, one in Uluberia, 2 in Syampur and one in Bagnan police station. Of the 17 subsidiary health centres, 6 are located in Amta, 6 in Uluberia, 3 in Bagnan and 2 in Syampur thana.

According to the Census of 1961, 1,05,850 persons of the subdivision were engaged in agriculture and 60,897 in industrial occupations. Jute and textile manufacture constitute the large scale industries located mostly in the Bauria and Uluberia police stations. The first cotton mill in India belonged to this subdivision. The textile mills are at Anantapur (Syampur P.S.) and Phuleswar (Uluberia P.S.) and jute mills at Kalsapa (Uluberia P.S.) and Chengail (Uluberia P.S.). There is also an iron foundry at Phuleswar. A cottage industry of some economic importance is the coir industry. The Coir Board opened in 1958 a Coir Research Institute and Model Coir Factory at Uluberia. There is also a Government-aided centre at Chackasi in west Bauria for making door mats and other coir products. The football and shuttlecock industry of Baniban and the mat making craft of Uluberia have been described in the articles on those places. The pottery

[1] L. S. S. O'Malley and M. Chakravarti—Bengal District Gazetteers: Howrah. Calcutta, 1909. p. 180.

artisans of Amta and Uluberia are noted for their proficiency. Handloom weaving is widespread in the thanas of Amta and Bagnan and west of the Kana Nadi. Bantul in Bagnan P.S. is the only centre of conch-shell industry in the district engaging about 400 families. Flat tiles of the Raniganj type are extensively manufactured in and around Uluberia and, after meeting local demands, are exported in large quantities to Calcutta and Howrah. Formerly, many Muslims in Amta and Bagnan found employment in the manufacture of brown country paper but this trade is now dying out owing to the competition of machine made products.

Temples worthy of mention for their architectural or sculptural merit are to be found at Asanda, Garh Bhabanipur, Singti (Uday Narayanpur P.S.), Amragari, Jaypur, Jhikira (Amta P.S.), Kalyanpur and Mellak (Bagnan P.S.). The mosque at Jangalbilas has a structure very unusual for such an edifice.[1]

The *Rās* fair at Uluberia, the Durgapuja *melā* at Fort Gloster, the *Gājan* celebrations at Kalyanpur, Baniban, Bagnan and Amragari, the *Chaḍak* festival at Hariop and Amta, the *Tālkāli* and *Mulākāli* festivals at Khalor, the *Rathajātrā* celebrations at Bangalpur, Deulgram, Bagnan, Amragari and Jhikira attract vast crowds.

Villages in the subdivision otherwise noticeable are Panitras where the celebrated Bengali novelist Sarat Chandra Chattopadhyay passed his last days and Agunshe, the native place of the late Justice Dwaraka Nath Mitra. At Nabasan, off Bagnan, the Ananda Niketan Samaj Siksha Kendra run by the Ananda Niketan Society, a voluntary social service organization, is devoted to the welfare of Scheduled Caste people of the neighbourhood. It also maintains a museum having a fine collection throwing light on the history, arts and crafts of the district.

[1] For detailed description of the various monuments, see relevant articles in this chapter.

APPENDIX

THE RAMAKRISHNA MATH AND MISSION : ITS IDEALS AND ACTIVITIES

The Bengali renaissance of the late 19th century activized every field of existence including the religious and the spiritual, the latter being very strongly influenced by a movement initiated by the seer Ramakrishna Paramhaṁsa and brought into fruition by the dynamic *sannyāsi* Swami Vivekananda. Sri Ramakrishna (1836-86) had tested Truth by following in turn the observances laid down in the major religions. "By the year 1875 he had finished his experiments and very soon he came into intimate contact with the thought currents and aspirations of Renascent India through Keshab Chandra Sen and the Brahmo Samaj. For the next eleven years, till his passing away in 1886, he was constantly pouring forth in simple words and rich eloquence, with the aid of stories and parables, the great truths he had realized, and hundreds of men and women, educated and unlettered, young and old, were his listeners."[1] His message was, "all religions were true; there is no need for any fight among religions."[2]

Shortly after his passing away, a monastic order bearing his name was set up on October 19, 1886 at Baranagar, two miles north of Calcutta, by his disciples headed by Swami Vivekananda. Its ideal was to raise a band of *sannyāsi* teachers of Vedanta, and with the help of the lay disciples, to carry on missionary and philanthropic work, looking upon all, irrespective of caste, creed and colour, as veritable manifestation of the Divine. A few years later, Swami Vivekananda represented Hinduism at the Parliament of Religions held at Chicago in September, 1893. There "he repeated with new argument, but with the same force of conviction, his thesis of a universal religion without limit of time or space, uniting the whole *Credo* of the human spirit, from the enslaved fetishism of the savage to the most liberal creative affirmations of modern science. He harmonized them into a magnificent synthesis, which, far from extinguishing the hope of a single one, helped all hopes to grow and flourish according to their own proper nature. There was to be no other dogma but the divinity inherent in man and his capacity for infinite evolution."[3]

[1-2] Swami Ranganathananda—The Ramakrishna Mission· Its Ideals and Activities. Calcutta, 1966. pp. 9-10.
[3] Romain Rolland—The Life of Vivekananda. pp. 43-44.

After his triumphant return from the West, Swamiji formed an Association on May 1, 1897, under the name of Ramakrishna Mission. Its object was "(1) to conduct the activities of the movement for the establishment of fellowship among the followers of different religions, knowing them all to be so many forms of one Eternal Religion; (2) to train men so as to make them competent to teach such knowledge or sciences as were conducive to the material and spiritual welfare of the masses; (3) to promote and encourage arts and industries; and (4) to introduce and spread among the people in general Vedantic and other religious ideals in the light of the life and teachings of Sri Ramakrisha. . . . After about six years, the original Math (Monastery) at Baranagore was shifted to Alambazar in Calcutta sometime during 1892. But when this new Math was considerably damaged by the great earthquake that occurred on the 12th June, 1897, it was again removed from there in February, 1898, to the garden-houses of Nilambar Mookherjee in the village at Belur on the western bank of the Ganges. The Swami, in order to establish a permanent home for the Ramakrishna Order and to train a band of monks for self-realization and for the acquisition of a capacity to serve the world in all possible ways, selected a plot of land at Belur for which the earnest money was paid to the landlord on the 22nd February, 1898 and he finally purchased it at a cost of Rs. 39,000" mainly contributed by his English admirer Miss Henrietta F. Muller and his American follower Mrs. Ole Bull. "It was on December 9, 1898 that the consecration ceremony of this new monastery was performed by the Swami himself, in spite of his failing health. From January 1, 1899, this place, now known as the Belur Math, became the Headquarters of the monks of the Ramakrishna Order."[1] A Trust deed was executed in 1901 to give it a legal status and subsequently a Society under the name of the Ramakrishna Mission was registered in 1909 under Act XXI of 1860 and its management was vested in a Governing Body consisting of the Trustees of the Belur Math.

Activities of the Ramakrishna Math and Mission

Besides the headquarters at Belur, the Ramakrishna Math and Mission has 115 branch centres in all, of which 52 are Mission centres, 19 combined Math and Mission centres and 44 Math centres in India and abroad. There are also 22 subcentres attached to some of the branch centres where monastic workers reside more or less permanently. The activities of this vast organization are best described by quoting from the General Report of the Ramakrishna Math and Mission issued by its General Secretary in July 1966.

"*Medical Service:* Most of the Math and Mission centres in India, Pakistan and Burma conducted various activities ministering to the physical needs of the public in general, irrespective of creed, colour

[1] Swami Tejasananda—The Ramakrishna Movement: Its Ideal and Activities. Calcutta, 1956. pp. 15-17.

or nationality. Typical of these are the Sevashramas at Varanasi, Vrindaban, Kankhal, Trivandrum and Rangoon, the T.B. Sanatorium at Ranchi and the Seva Pratishthan of Calcutta. In 1964-65 there were 11 indoor Hospitals with 1,259 beds, which accommodated 24,833 patients, and 65 outdoor Dispensaries, which treated 29,76,135 cases, including old ones. Besides, the centres at Salem, Bombay, Kanpur and New Delhi as also at some other places had provision for emergency or observation indoor wards attached to their dispensaries. The Rangoon hospital had provision for the treatment of Cancer with radium and deep X-ray. The Veterinary section of the Shyamala Tal Ashrama treated 1,959 animals.

"*Educational Work:* The twin organisation ran during 1966, 4 general Colleges at Madras, Rahara (24-Parganas), Belur (Howrah), and Narendrapur (24-Parganas)—the last two residential—with 2,347 students on their rolls. An art college at Perianaickenpalayam (Coimbatore) with Pre-University classes only with 170 students, 2 B. T. Colleges at Belur and Perianaickenpalayam with 233 students, 2 Basic Training Schools at Perianaickenpalayam and Madras with 260 students, one Post-Graduate Basic Training College at Rahara and 3 Junior Basic Training Colleges at Rahara, Sarisha and Sargachhi with 376 students, 2 Colleges for Physical Education and Rural Higher Education and a School of Agriculture with 100, 103, and 61 students respectively at Perianaickenpalayam, 4 Engineering Schools at Belur, Belgharia, Madras and Perianaickenpalayam with 1,609 students, 8 Junior Technical or Industrial Schools with 662 boys and 36 girls, 84 Students' Homes or Hostels, including some Orphanages, with 7,343 boys and 652 girls, 4 Chatushpathis with 67 students, 12 Multi-purpose Higher Secondary Schools with 4,832 boys and 339 girls, 9 Higher Secondary Schools with 3,453 boys and 1,781 girls, 18 High and Secondary Schools with 6,134 boys and 5,097 girls, 35 Senior Basic and M. E. Schools with 5,312 boys and 4,546 girls, 51 Junior Basic, U. P. and Elementary Schools with 6,708 boys and 2,800 girls and 63 Lower and other grades of Schools with 3,046 boys and 2,877 girls. The Seva Pratisthan, Calcutta and the Sevashrama, Rangoon trained nurses, the number of trainees being 163. Thus there were altogether 44,368 boys and 18,535 girls in the educational institutions run by the Math and Mission in India, Pakistan, Singapore, Fiji and Mauritius. Besides these, the Institute of Culture in Calcutta conducted a Day Hostel for 800 students, a School of Humanistic and Cultural Studies and a School of Languages for teaching different Indian and foreign languages with 72 and 692 students respectively. The Ashrama at Narendrapur also conducted a Blind Boys' Academy with 81 blind students.

"*Work for Women:* The Mission has ever been conscious of its duties to the women of India. Typical of the work done for them are the Maternity Section of the Seva Pratishthan for expectant

mothers in Calcutta, the Domiciliary and Maternity Clinic at Jalpaiguri, the women's sections of the hospitals at Varanasi, Vrindaban and Rangoon, the attached Invalid Women's Home at Varanasi, the Sarada Vidyalaya at Madras, Girls' High Schools at Jamshedpur and the Sarada Mandir at Sarisha (24-Parganas). Besides, there are special arrangements for women in the other hospitals, dispensaries and schools, and some institutions are conducted particularly for them.

"*Rural Uplift and Work among the Labouring and Backward Classes:* The Math and Mission have all along tried their best to serve their unfortunate countrymen who have fallen back culturally or otherwise. In addition to the more prominent village Ashramas like those at Cherrapunji, Sarisha, Manasadwip, Jairambati, Kamarpukur, Sargachhi, Taki, Perianaickenpalayam, Kalady, and the Gurukula at Trichur, quite a number of rural sub-centres—both permanent and semi-permanent—are run under the Mission branches at Belur, Sarisha, Bankura, Tiruvalla, Narendrapur and Cherrapunji. Of these special mention may be made of the numerous village sub-centres which have been started for serving the hill tribes, the backward classes and the village folk in various ways. Steps have been taken to spread the Mission's activity in NEFA also. In addition to such numerous activities, preaching and educative tours with magic lanterns, films and so on are also undertaken quite frequently. For the labouring classes in industrial areas the Mission conducted a number of Night Schools etc. . . .

"*Relief Work:* After the independence of the country in 1947, the Government takes the initiative in starting relief measures wherever any calamity, natural or otherwise, takes place. Therefore, the Mission did not feel called upon to pay as great attention to this side of its activities as before, though it never ignored a real call for succour. When thousands of men, women and children crossed over to India from Pakistan in 1964, the Mission opened five centres, for their relief, one after another, at Gede, Petrapole, Hingalganj and Banpur on West Bengal border and Harimura in the Goalpara district of Assam. It also conducted the Migrants' Relief Work at Kurud in M.P. where 10,000 migrants were camped. For all the above activities, a sum of about Rs. 2,38,000 was spent. With financial help from the Headquarters, the Katihar Ashrama rehabilitated 75 displaced families near Purnea town.

"*Foreign Work:* The monks of the Ramakrishna Math took upon themselves the task of carrying the message of India to distant lands. The various centres in North and South America, Europe and the foreign countries of Asia bear ample evidence of their labour of love carried on through preaching, publications, etc., as also medical or educational work.

"*Spiritual and Cultural Work:* Both Math and Mission centres

laid emphasis on the dissemination of the spiritual and cultural ideals of India, and through various types of activity tried to give a practical shape to the teaching of Sri Ramakrishna that all religions are true. The centres established real points of contact between people of different faiths through public celebrations, meetings, classes, publications, etc. They also conducted Libraries and Reading Rooms. A number of Sanskrit Chatuspathis too were run, partly for the benefit of the members of the Order. At least ten centres published books on religious subjects and ten magazines in different languages. The Math centres at Mayavati, Baghbazar (Calcutta), Madras, Nagpur, Mysore, Rajkot and Trichur in particular, have to their credit a considerable number of useful publications. Special mention should also be made of the Institute of Culture in Calcutta, which has been trying to bring together eminent men and women of India and other lands in cultural fellowship."[1]

The Ramakrishna Mission and the Ramakrishna Math, with their respective branches, are distinct institutions but they are closely related inasmuch as the Governing Body of the former consists of the same persons constituting the Board of Trustees of the latter. the principal workers of both the organizations are the same and all have their headquarters at the Belur Math. The Math and the Mission, however, own separate funds of which separate audited accounts are kept.

The main attraction in the Math campus is the imposing temple of Sri Ramakrishna founded in 1935 and formally inaugurated on January 14, 1938. Planned by Swami Vivekananda, it combines in itself the graceful features of almost every phase of Indian architecture. The entrance gate and the base of the temple represent the architecture of the ancient Buddhist cave temples. The windows and balconies with their arches recall the Rajput and Mughal styles. The large hall used for congregational purposes is suggestive of a church. The domes and pavilions of the main shrine draw their structural inspiration from the usual Hindu temples in Bengal and Orissa. Built of gray Chunar stone and representing the salient features of Eastern and Western architecture, it is a dignified commentary in stone on Sri Ramakrishna's universality of outlook. The sanctum contains "the marble image of Sri Ramakrishna . . . installed in a meditative pose on a full-blossomed lotus-pedestal. . . . It is 112 feet high and 109 feet in breadth and is surmounted by a central dome of exquisite proportions, with a gold-plated metal pitcher crowning it. The eight other smaller corner domes in two tiers and four pavilions surrounding the central one, give a picturesque effect to the whole edifice. . . .

"This magnificent temple . . . bears on the top of the main entrance

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[1] The General Report of the Ramakrishna Math & Mission: July 1966. Issued by the General Secretary, from Belur Math, Howrah. pp. 3-7.

the significant symbol (monogram) of the Ramakrishna Math and Mission, which was designed by Swami Vivekananda himself to convey to the minds of all a comprehensive picture of the distinctive purpose and goal of human existence. The wavy waters, the blossomed lotus and the rising sun symbolize respectively *Karma* (work), *Bhakti* (devotion) and *Jnana* (knowledge); the all-encompassing serpent represents the meditative process (*Yoga*), and the awakening of the *Kundalini* (the cosmic power residing hidden in every individual); whereas the swan signifies the Supreme Self. All things taken together imply that when there is a balanced combination of *Karma*, *Bhakti*, *Jnana* and *Yoga* in the life of an aspirant, he is blessed with the vision of the Supreme Reality. . . .

"Besides the Sri Ramakrishna Temple, there are three other handsomely designed shrines dedicated to the Holy Mother, Swami Vivekananda and Swami Brahmananda—all lining the long revetment built along the bank of the Ganges. The temple of the Holy Mother was consecrated on Wednesday the 21st December, 1921, and those of Swami Vivekananda and Swami Brahmananda on Monday the 28th January and Thursday the 7th February, 1924, respectively. . . . On the southern side of the Vivekananda shrine, is enclosed within a railing the holy cremation ground where the mortal remains of some of the monastic disciples[1] of the Master were consigned to the flame. . . . The original monastery building where Swami Vivekananda and his brother disciples generally lived and which formed the nucleus of the present Belur Math, stands even today with its hallowed associations as a source of perennial inspiration to all. In the room on the first floor, where Swami Vivekananda spent his last days and passed into Mahasamadhi, all the things used by him both in the East and the West have as far as available been preserved and the arrangement has been kept as it was during his life-time. Just by the side of this building, is situated the old shrine where the sacred relics of Sri Ramakrishna were originally worshipped till they were removed to and enshrined in the newly built Temple of Sri Ramakrishna."[2] The residential quarters of the members of the monastic order, the old guest-house, the Belur Math library, the Mission office, the charitable dispensary etc. are housed in ancillary buildings. A fine approach road runs from the Grand Trunk Road to the main shrine. Here an annual fair is held on the occasion of the birth anniversary of Sri Ramakrishna.

Outside the Math campus, on either side of the approach road are located the Vidyamandir, a residential college of arts and science,

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[1] Swami Adwaitananda (1828-28.12.1909), Ramakrishnananda (1863-21.8.1911), Premananda (1861-30.7.1918), Saradananda (1865-19.8.1927), Suddhananda (1867-12.12.1932), Sivananda (1854-20.2.1934) and Akhandananda (1864-1.2.1937).

[2] Swami Tejasananda—The Ramakrishna Movement: Its Ideals and Activities Belur Math, 1956. pp. 18-21.

a three-storied students' hostel, an indoor hospital, the Tattvamandir (a *chatuspāṭhi* to teach the inmates of the Ashrama Vedanta philosophy), a teachers' training college, and the Shilpamandir, an industrial and technical institution running licentiate courses in certain subjects.[1]

[1] The educational activities of the Ramakrishna Math and Mission have been discussed in Chapter XIII on Education and Culture.

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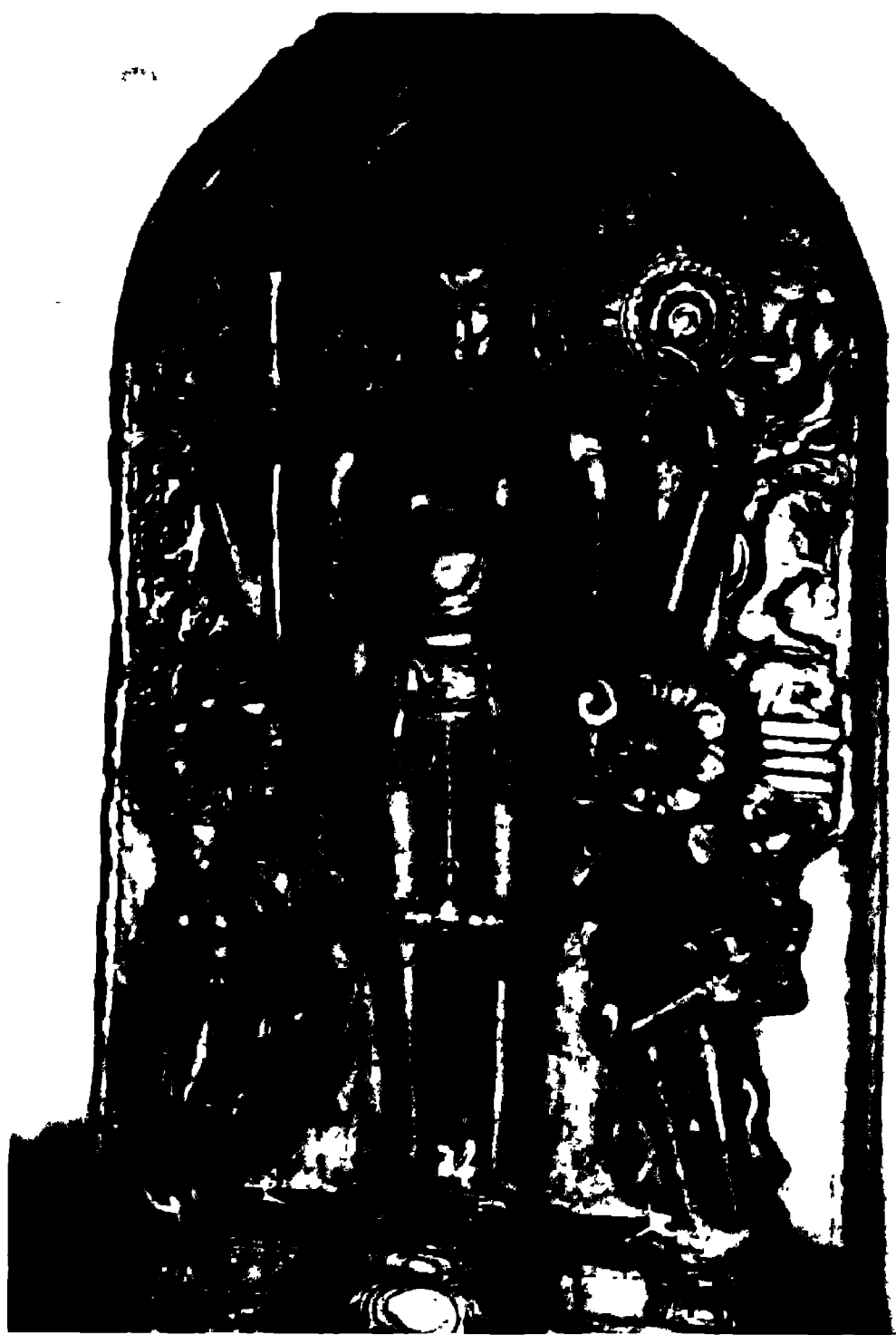
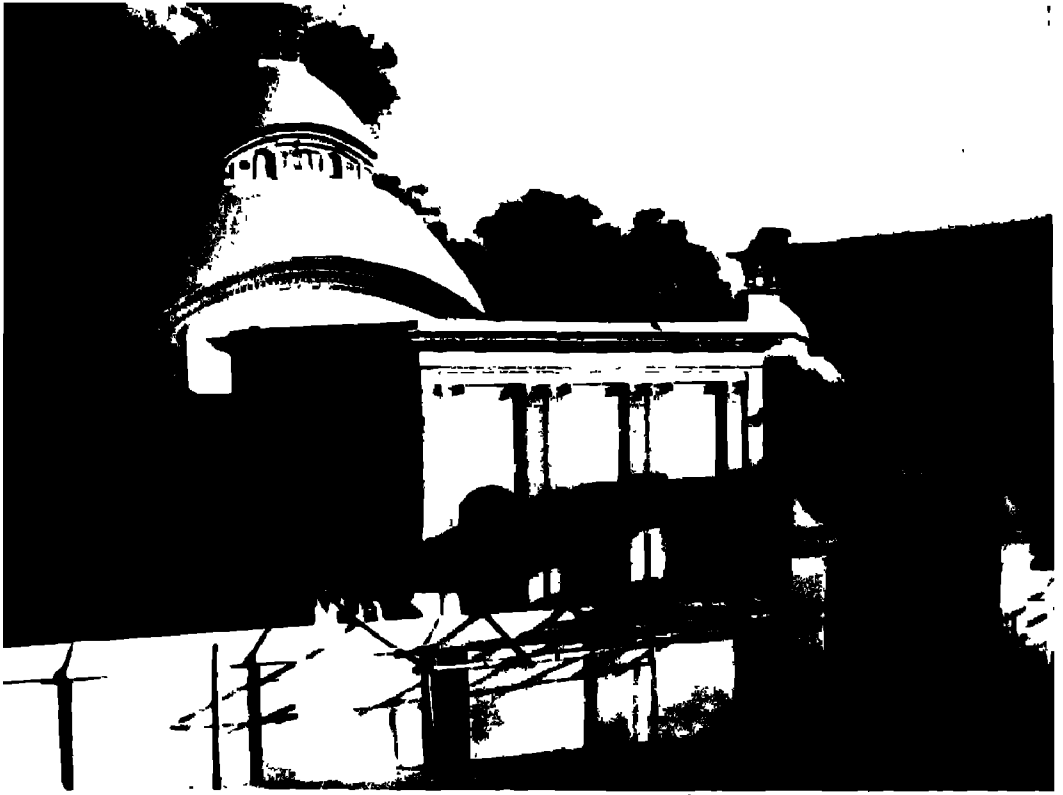
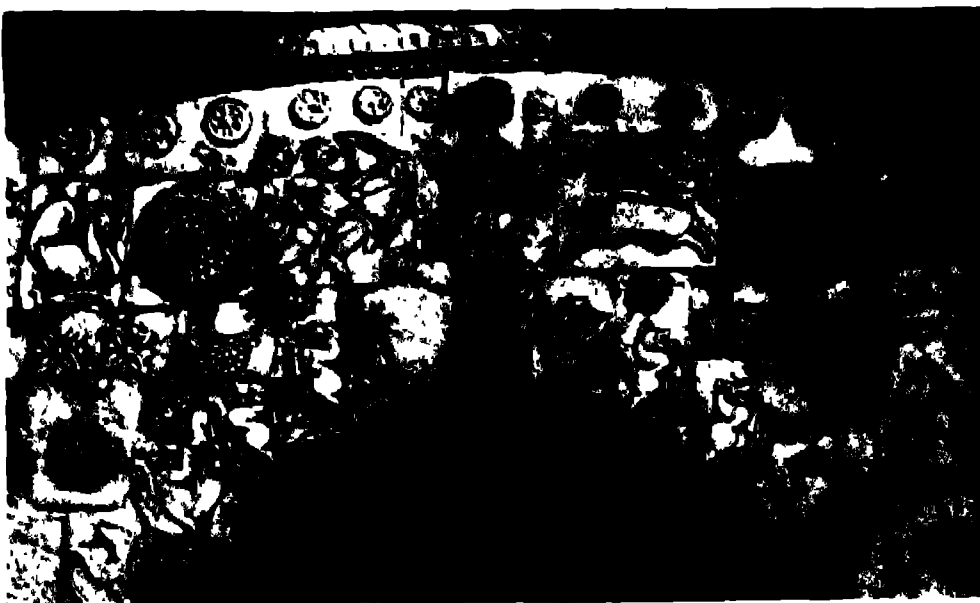

A Pāla Vishnu image from Joypur

Melai Chandi of Amta, perhaps the most popular folk goddess of the district

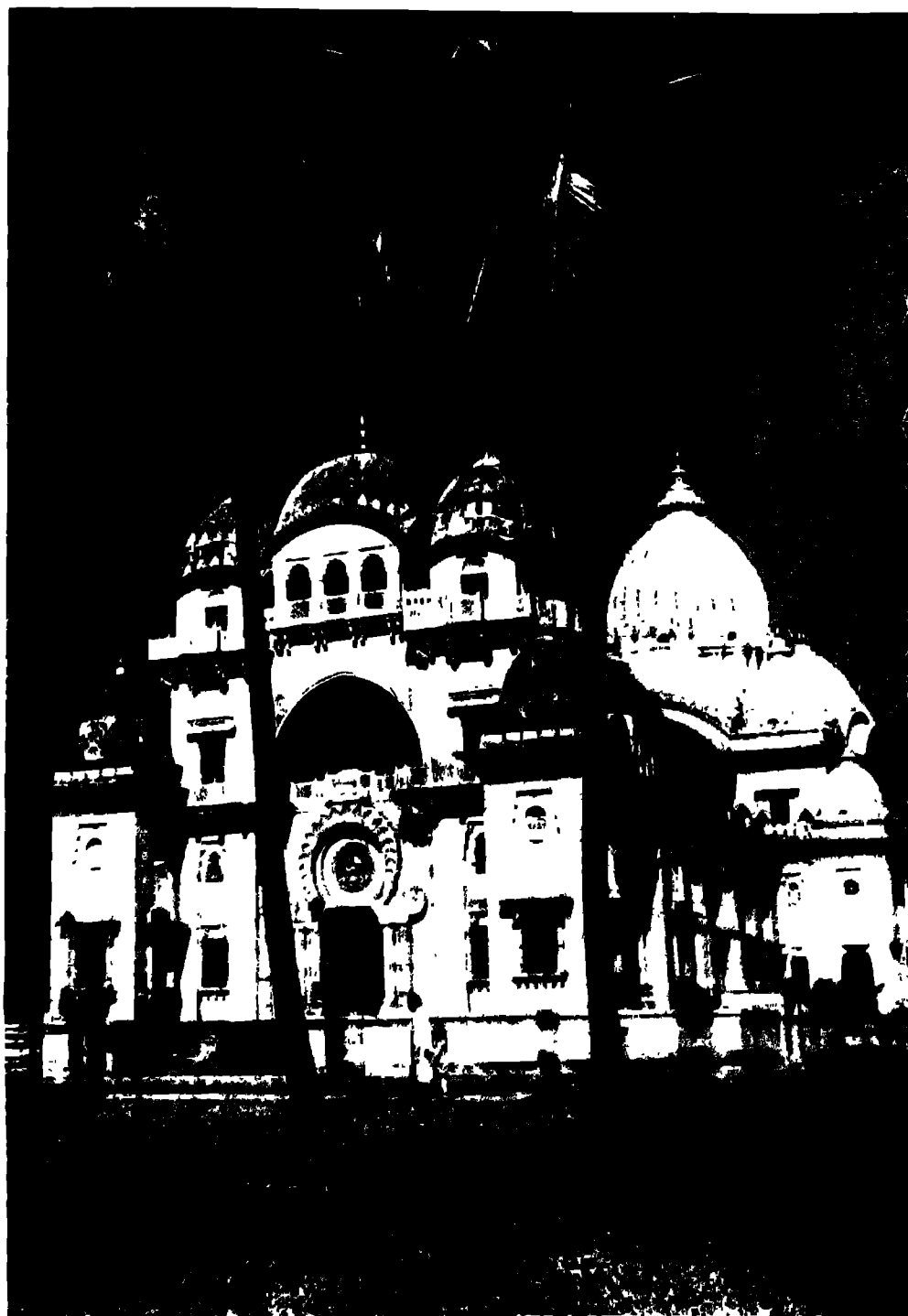
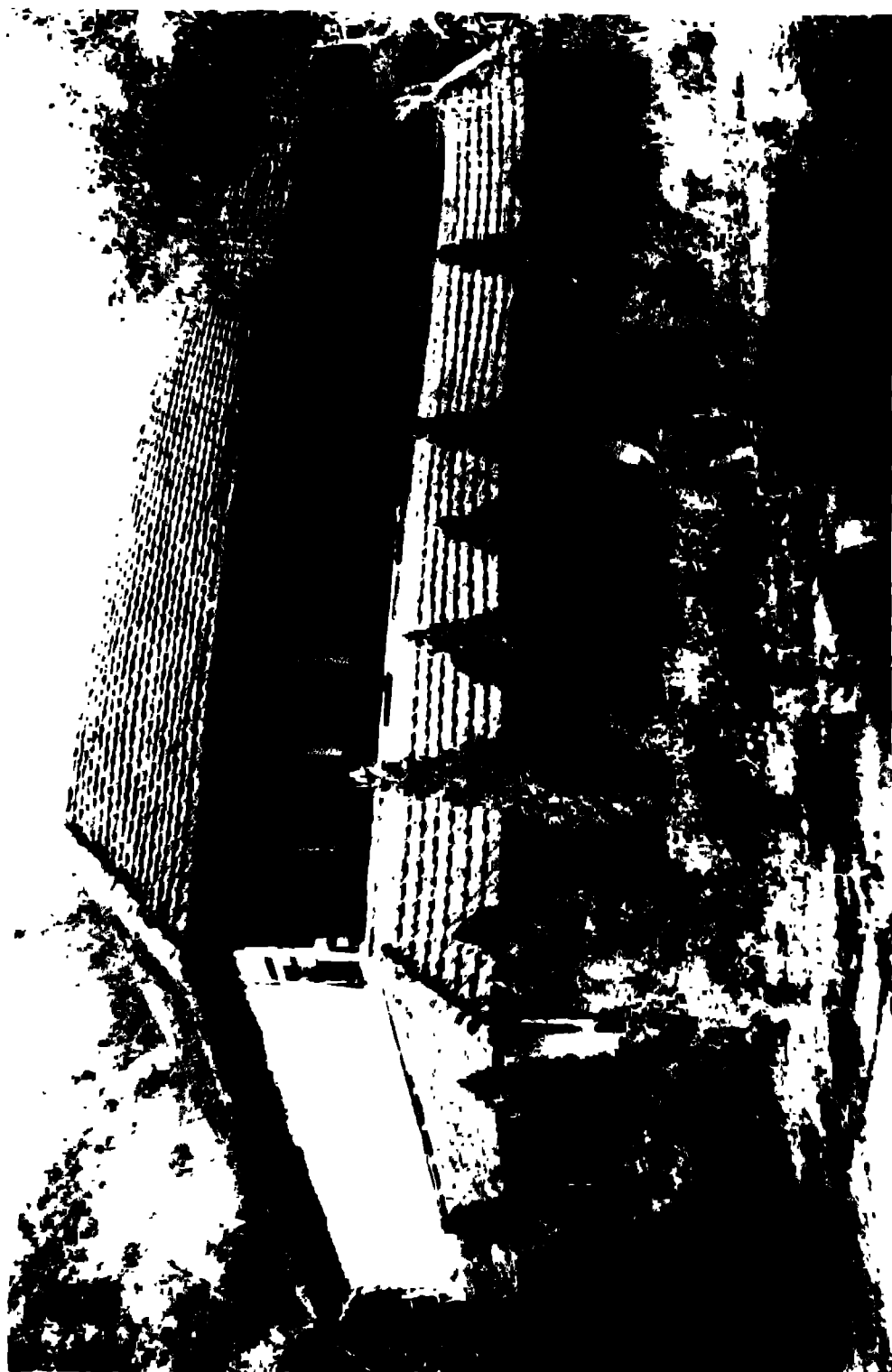
Mahākāl, the principal deity at the Bhoṭbagan Maṭh

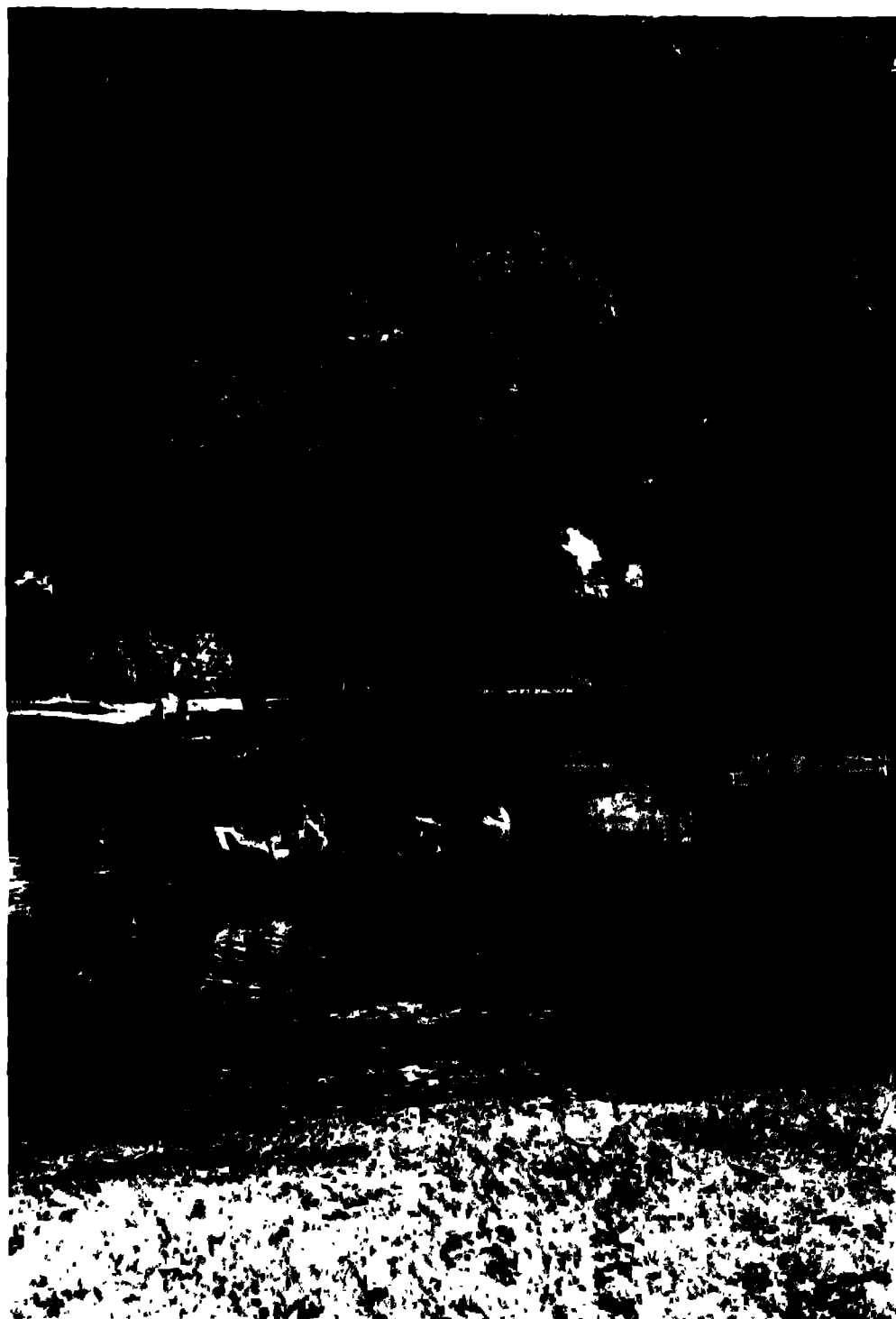
Wood-carving at a temple door at Baradaksrit

The temple of Mākar-Chaṇḍi at Mākardaha and the image of the deity

Mellok temple

Renovated temple at Mahisamuri and one of its many terracotta panels

Śiva temple at Sultanpur built in A.D. 1665-66 and terracotta panels on its façade

A Muslim saint's dargāh of great sanctity at Jaṅgalvilash

Brāhmo prayer hall at Amrāgori and terracotta panel from local Dadhi Mādhab temple

Belur Math, currently the biggest temple in West Bengal

The country house of Sarat Chandra Chattopadhyay at Sāmtāberh

Howrah bridge and the great banyan tree at the Botanical Gardens, Sibpur

A panoramic view of the Botanical Gardens, Sibpore

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Key : ā = আ । आ, ö = ঔ । औ, ã = আঁ । आँ, ṁ = ং । ं, ṅ = ঙ । ङ,
ch = চ । च, chh = ছ । छ; t = ত । त, ṭ = ট । ट, ṭh = ঠ । ठ;
ḍ = ড । ड; ḍh = ঢ । ढ; s = স,শ । स,श, sh = ষ । ष)